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DESIGNED CHIEFLY FOR THE JUNIOR STUDENTS IN THE UNIVERSITIES, AND THE HIGHER CLASSES IN SCHOOLS.

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CONTINUED.

CHAPTER I.

THE HISTORY OF ENGLAND.

THE advantages, which result from an acquaintance with the history of our own country, are too obvious to require many previous observations. Such knowledge is of the greatest importance to all those who take an active part in the public service, either as officers of the army or navy, magistrates, or members of parliament. And to persons of all other descriptions it is equally agreeable, if not equally necessary; because, as every Englishman finds a peculiar gratification in deciding upon the propriety of political measures, and estimating the merits of those who direct the helm of government; he cannot form correct opinions, by adverting to the plans which have for ages been pursued, as conducive to the best interests of the nation, or by contemplating the causes of national disgrace or glory, if he neglects to lay the foundation, upon which such correct opinions can alone be built.

The love of our country naturally awakens in us a spirit of curiosity to inquire into the conduct of our ancestors, and to learn the memorable events of their history: and this is certainly a far more urgent motive than any which usually prompts us to the pursuit of other historical researches. Nothing that happened to our forefathers can be a matter of indifference to us. It is natural to indulge the mixed emotions of veneration and esteem for them; and our regard is not founded upon blind partiality, but results from the most steady and rational attachment. We are their descendants, we reap the fruits of their public and private labours, and we not only share the inheritance of their property, but derive reputation from their noble actions. A Russian or a Turk may have a strong predilection for his country, and entertain a profound veneration for his ancestors: but, destitute as he finds himself of an equal share of the blessings which result from security, liberty, and impartial laws, he can never feel the same generous and pure patriotism, which glows in the breast of a Briton.

If an Englishman, said the great Frederic of Prussia, has no knowledge of those kings that filled the throne of Persia; if his memory is embarrassed with that infinite number of popes that ruled the church, we are ready to excuse him: but we shall hardly have the same indulgence for him, if he is a stranger to the origin of parliaments, to the customs of his country, and to the different lines of kings who have reigned in England—Memoirs of the House of Brandenburg.

In the eventful pages of her history England presents some of the most interesting scenes that the annals of the world can produce. In this country

liberty has maintained frequent and bloody conflicts with despotism; sometimes she has sunk oppressed under the chains of tyrants, and sometimes reared her head in triumph.. Here Charles the first, brought, in defiance of all justice, to the scaffold, and James the second compelled by the voice of his injured people to abdicate his throne, have given awful lessons to the sovereigns of the world. Here kings and subjects, after engaging in the warmest opposition of interests, have made mutual concessions; and the prerogative of the one, and the privileges of the other, have been fixed upon the solid basis of the general good. In the midst of civil commotions, as well as in the intervals of tranquillity, Science, Genius, and Arts have flourished, and advanced the national character above that of the neighbouring states. For this is the country of men deservedly renowned for their talents, learning, and discoveries in the various branches of art and science; to whom future generations will bow with respect and veneration, as to their guides and instructors. In this island Shakespeare and Milton displayed their vast powers of original genius, Locke developed the faculties of the mind, and Newton explained and illustrated the laws of nature. Here were trained those adventurous navigators, who have conveyed the British flag to the extremities of the globe, added new dominions to their native land, extended the range of nautical science, and spread the blessings of civilization among the most remote people. Here mankind at large may contemplate a CONSTITUTION, which is propitious to the highest advancement of the moral and intellectual powers of man, which ensures personal safety, maintains personal

dignity, and combines the public and private advantages of all other governments.*

This constitution, which has so powerful and so happy an influence upon the character, sentiments, and prosperity of the British nation, arose from the conflict of discordant interests, and was meliorated by the wisdom of the most sagacious and enlightened legislators.

Reserving a more exact inquiry into the regular train of events for future studies, let us at present confine our attention to a short view of those memorable reigns, during which the *principles* of the present constitution were developed, and those *laws* were enacted which form its support.

From the vast and gloomy forests of Germany, Hengist and Horsa, attended by their warlike followers, brought into Britain new arts of war, and new institutions of civil policy. A. D. 450. From the obvious tendency of the Saxon institutions to establish public order and private comfort, they found a welcome reception among such Britons as were timid and docile; while those who were of a ferocious temper, and spurn-

* By the Constitution is to be understood, "that collection of laws, establishments, and customs, derived from certain principles of expediency and justice, and directed to certain objects of public utility, according to which the majority of the British people have agreed to be governed." Or, according to a more popular mode of definition, it is "the legislative and executive government of Great Britain, consisting of the King, the House of Peers, and the House of Commons, as established at the Revolution, and as their privileges have been explained by subsequent acts of parliament."

ed the tyranny of foreign power, fled to the inaccessible mountains of Wales, and there enjoyed their original independence.

As far as we are able to discern the imperfect traces of Saxon customs and establishments, by the dim light of Roman and English history, we are struck with their mildness, equity, and wisdom. The descent of the crown was hereditary, the subordinate magistrates were elected by the people, capital punishments were rarely inflicted for the first offence, and their lands were bequeathed equally to all the sons, without any regard to primogeniture. In the *Wittena Gemote*, or assembly of the Wise men, consisting of the superior Clergy and Noblemen, all business for the service of the public was transacted, and all laws were passed. For the origin of this assembly, we must have recourse to remote antiquity; as similar meetings, constituted, indeed, in a rude and imperfect manner, were convened among the ancient Germans from the earliest times.*

ALFRED, surnamed the Great, derived that illustrious title from the exercise of every quality, which adorned the scholar, the warrior, the patriot, and the legislator. After chasing the Danish plunderers from his shores, he directed his attention to the internal regulation of his kingdom. A. D. 872. He digested the discordant laws of the heptarchy into one consistent code, adopted a uniform plan of government,

* For the mode in which the Wittena-gemote was constituted see Brady's Introduction to the History of England, p. 7, 8, &c. For an account of the ancient Germans, the reader is referred to Hume, vol. i. p. 198; Modern Europe, vol. i. p. 58; and Tacitus de Moribus Germanorum, c. 7.

and made every one of his subjects, without regard to rank or fortune, responsible to his immediate superior for his own conduct, and that of his neighbour. For the speedy decision of all civil and criminal causes, he established courts of justice in the various districts, in which complaints arose. Of all his institutions, the most remarkable and the most celebrated was the *Trial by Jury*. Too much praise cannot be bestowed upon him for exempting his accused subjects from the arbitrary sentence of a judge, and leaving the determination of their guilt or innocence to a council of their equals, too numerous to be influenced by mercenary motives, and whose unanimity could admit no doubts as to the justice of their decisions.*

The precipitate conduct of Harold, in risking his crown upon the issue of a single battle, gave to William of Normandy the Kingdom of England. A. D. 1066. The Conqueror overturned at once the whole fabric of the Saxon laws, and erected the feudal system upon its ruins.

A proper acquaintance with this extraordinary institution, which was at that time common in all the countries upon the continent of Europe, conduces materially to illustrate the history of those times, and to explain the ancient tenure of landed property. For a particular account of it we refer to our history of modern Europe.

The first of the Norman tyrants not only broke the line of hereditary succession to the crown of England, but reduced the people to the most abject slavery. The confiscations of the Saxon estates, and the general

* The detail of his eventful and glorious reign is written with peculiar spirit and elegance by Hume, vol. i, p. 76.

distress of their proprietors, plainly indicated his policy and rapacity. All the lands of the natives were either seized for the king, or given to his favourites; large tracts formerly cultivated by the industrious Saxons were abandoned to the original wildness of nature; and even whole counties were converted into forests and wastes, to afford an unbounded scope to his passion for the chase.

The severity of the forest laws sufficiently marks the selfishness of his diversions, and the cruelty of his temper. The life of an animal was valued at a higher rate than that of a man; and this uncontrolled and destructive ambition was extended to the fowls of the air and the beasts of the field.

With the Norman language, which was adopted in the services of the church, as well as in the courts of justice, were introduced the Norman laws. The ancient Trial by Jury was exchanged for the uncertain and unjust decision by single combat. The extinction of all fires at the melancholy sound of the Curfew was a striking emblem of the extinction of liberty. The nation groaned under every distress that an obdurate and politic conqueror could inflict; and their chains were so firmly rivetted, as to require a degree of energy and unanimity to break them, which the timid and oppressed Saxons had not sufficient resolution to exert.

In the following reigns of the Norman tyrants the same hardships were endured with little alleviation. The people still continued to have no resource against the execution of the most sanguinary laws. The exorbitant power of the king, and its frequent abuses, at length roused a spirit of opposition, which was at once determined and irresistible. But as his feudal demesnes were large, and his influence extended over a

great number of vassals, they did not think themselves sufficiently formidable to oppose his authority, without securing the co-operation of the other possessors of land. They therefore held out to the commons the most advantageous inducements, by promising to stipulate with the king for a redress of all public grievances, and an augmentation of their common privileges.

In Runny Mead the great foundation of English liberty was laid. A. D. 1215. Carte, vol. i, p. 831. There the reluctant and perfidious John, after having repeatedly disregarded their former solicitations, was compelled to sign MAGNA CHARTA, and the CHARTA OF THE FOREST.* The arm of force and terror, which his triumphant barons held over his head, was strengthened by the claims of justice. It is true, indeed, that as they held their estates by the feudal tenure, they were obliged to submit to the conditions he imposed, and to obey the mandates of an arbitrary chieftain. But as all the kings from the conquest had solemnly sworn at their coronation to revive the laws of Edward the confessor, and had uniformly violated their engagements, the barons conceived themselves justifiable, when their partizans and adherents were suffi-

* He murdered his nephew Arthur with his own hands. See Carte, vol. i, p. 796. I have heard Mr. Tho. Warton say—"You may read Hume for his elegance; but Carte is the historian for facts." My careful perusal of his elaborate work has fully confirmed the truth of this observation: and I think him an historian particularly well adapted to the present times of political novelties; as he is an intelligent and zealous advocate for the rights of kings, as well as subjects; and maintains upon all occasions the honour and dignity of the Church of England.

ciently strong and numerous, in demanding from John, by the power of the sword, the full execution of his promise.

The abject and servile state of the people previous to this auspicious event is sufficiently evident, from considering the immunities granted by Magna Charta, and the Charter of the Forest. The barons vindicated more of their rights than merely consisted in the abolition of their own hardships and grievances. Firm in their engagements to the commons, who enlisted under their standard, they obtained for them the participation of many of their own privileges. They were equally exempted from unreasonable fines, or illegal distresses, for service due to the crown; and acquired the privilege of disposing of their property by will. The provisions of Magna Charta enjoined an uniformity of weights and measures, gave new encouragements to commerce, by the protection of foreign merchants; prohibited all delay in the administration of justice; established annual circuits of judges; confirmed the liberties of all cities and districts; and protected every freeholder in the full enjoyment of his life, liberty, and property; unless they were pronounced by his peers to be forfeited to the laws of his country.*

* "Nullus liber homo capiatur, vel imprisonetur, vel disseisietur de libero tenemento suo, vel libertatibus, vel liberis consuetudinibus suis; aut utlagetur, aut exulet, aut aliquo modo destruetur. Nec super eum ibimus, nec super eum mittemus, nisi per legale judicium parium suorum, vel per legem terræ. Nulli vendemus, nulli negabimus, aut differemus judicium, vel rectum." Magna Charta cap. 29.

Thus was the first general opposition successfully made against arbitrary power; and those rights were vindicated, which the ancient inhabitants of the island had enjoyed. As Magna Charta was granted under circumstances of great solemnity, and afterwards ratified at the beginning of every subsequent reign, it was a sacred hostage deposited in the hands of the people, for the equitable government of their kings. Unlike the traditional maxims of tyrannical power, to which any colour of interpretation could be given, which might suit the caprice, the folly, or the necessity of absolute monarchs, this celebrated Charter was a public and conspicuous stipulation, to which immediate appeal might be made to determine the right of the commoners to a redress of grievances, and the free administration of justice. It was the root, from which salutary laws gradually branched out, as the state of society became more civilised and enlightened, for the protection and security not only of the proprietors of land and of merchants, who it is to be remarked, were its sole objects, but of persons of every rank and degree in the kingdom.

In the reign of Henry the third, which although it was of longer continuance than that of any other monarch, who has ever swayed the English sceptre, and was remarkable for vexatious conflicts between the haughty barons and a capricious king, we may dis-

" This article is so *important*, that it may be said to comprehend the whole end and design of political societies; and from that moment the English would have been a free people, if there were not an immense difference between the making of laws, and the observing of them." De Lolme on the Constitution, p. 28.

cover some of the earliest traces of a representative legislature. The captive monarch, intimidated by the sword of the imperious Simon Montford, Earl of Leicester, issued orders for every county to depute persons to assist him and his nobles in their deliberations on state affairs. Thus to the distractions and troubles of these disastrous times, England is indebted for the representatives of the people being first called to parliament.

"There are still preserved in the tower of London some writs issued, during this reign, for the choice of two knights in each shire, to represent their county in parliament; but this representation was not yet grown to a settled custom: and though there are no summons to either lords or commons, nor any rolls of this particular parliament as yet discovered in any of our repositories of records; yet by other accounts given thereof, these lesser barons, knights, and military tenants holding immediately of the crown, seem to have been summoned, according to John's magna charta, by a general proclamation, to appear not by any representation, but in their own persons."

The more regular establishment of the house of commons may, however, be referred to the succeeding reign of EDWARD THE FIRST. A. D. 1295. Anno 18. Edw I. See Brady's Introduction for a copy of one of the writs, p. 149. Carte, vol. ii, p. 151. Strongly actuated by the martial spirit of his age, he engaged in long and expensive wars against Wales and Scotland, in consequence of which his treasury was exhausted, and his only resource for regular supplies was found in the contributions of his subjects. But as the mode pursued by his predecessors of filling their coffers had been both odious, and in a great de-

gree inefficient, he devised a method of obtaining by their own consent what had formerly been wrested by the arbitrary mandate of the king. With this view, the sheriffs of the different counties were commanded to invite the towns and boroughs to send deputies to parliament, to provide for his pecuniary wants, and to ratify the resolutions made by himself and the house of lords. He likewise annexed an important article to magna charta, by which he bound himself and his successors not to raise any subsidies whatever, without the approbation of both lords and commons. Several excellent laws for the ease and benefit of all ranks of his subjects were passed in this "general parliament," which gave infinite satisfaction to the whole body of the nation, and gained Edward the entire affections of his people. A. D. 1275. Carte, vol. ii, p. 182.

From the praise which many writers give to this great monarch, some share must be deducted on account of the necessities, to which he exposed himself by his frequent wars. The provisions of magna charta had doubtless been very conducive to the extent of freedom: but we find, that with whatever veneration the people might regard them, they had been constantly violated, whenever the immediate predecessors of Edward the first were powerful enough to break their promises. A house composed of the representatives of the people was the only bulwark of sufficient strength to check the torrent of despotism: and the importunity of the commons for more liberty, and of the king for pecuniary aid, failed not to produce such gradual concessions from both parties, as contributed to fix in succeeding times an equal balance of power.

The character of Edward the first was marked not only by the bravery of a warrior, but the more useful and profound talents of a legislator. He ratified both the charters, and observed their conditions with a scrupulous exactness, which formed the distinguished glory of his reign. He afforded a free and extensive scope to the exercise of the statutes of the realm, surrendered a part of his right of sending mandates to arrest the progress of justice; and, as a decisive proof of his respect for the laws, and his alacrity to promote their impartial administration, he caused his son, the prince of Wales, to be publicly apprehended and imprisoned, for breaking down the fences and killing the deer of Walter de Langton, bishop of Litchfield and Coventry. A. D. 1305. Rapin, vol. i, p. 383. fol.

It is natural enough to conclude, that as at this period the members of both houses of parliament held their deliberations under the authority of a wise and moderate sovereign, they would make the greatest interest of the nation at large the subjects of their debates, and thus improve the science of legislation. Accordingly we find that they gave their attention to many plans of great public utility; they passed laws for establishing manufactures in various parts of England, for supporting the parochial clergy by the endowment of vicarages, and for restraining the encroachments and the rapacity of the see of Rome. Every succeeding generation has expressed its applause of this illustrious reign, and felt the benefits of its wise and salutary institutions. By Edward the first the laws were carried so far towards perfection, that he has been styled the English Justinian. Sir Matthew Hale did not scruple to affirm, that more was done in the first thirteen years of his government, to settle and

establish the distributive justice of the kingdom, than in all the ages down to his own time. Blackstone's Comment. vol. iv, p. 424.

To trace the progress of the increasing privileges of the house of commons, we must have recourse to particular facts. In a tone of bold and just complaint the two houses of parliament called upon the weak and unfortunate Edward the second to banish Gaveston, his insinuating but licentious favourite, from his court. This was the first exercise of that important privilege, which consisted in the impeachment of the suspected ministers of the crown. By the petition annexed to their bills for granting subsidies to Edward the third and Henry the fourth, the house of commons claimed a proportionable share of the legislation with the king and the house of lords, by making bills for pecuniary supplies originate with themselves.

In the martial reign of EDWARD THE THIRD, the parliament is supposed to have assumed its present form by a separation of the commons from the lords. The celebrated statute for defining treasons was one of the first productions of this newly modelled assembly. Many laws were passed for depressing the civil power of the pope, the security of personal property, and the interests of trade and commerce. During this reign magna charta was ten times confirmed; and this repeated ratification conferred more glory upon the king, than all his victories obtained in France or Wales.

The glorious victories of CRESSY, POICTIERS, and AGINCOURT, cannot fail to engage our attention, and fill the mind of an Englishman with the highest and most favourable opinion of the valour of his ancestors.

The laurels reaped by an Edward and a Henry are still fresh and unfading; and the voice of fame will proclaim their exploits to the remotest posterity. Scenes of intestine commotion succeeded: and the houses of York and Lancaster combated with the malice of demons, and the fierceness of barbarians, for the crown of the meek and pious Henry the sixth. A. D. 1400, &c. The country was abandoned to the desolation of war, the blood of the noblest families was shed in the fatal battles of St. Alban's, Wakefield, Towton, and Tewkesbury; but no advantage accrued from such inhuman contests to the general good of the people. The voice of law and humanity was drowned by the rude clash of arms; and the incredible slaughter that was made by the contending factions was a melancholy proof of the prevalence of the feudal system, and of the alacrity with which the people flew to arms, whenever the standard of war was raised by the imperious barons.

While we remark the exorbitant influence of a martial aristocracy, and the indiscretion and violence of some of the kings, whose measures they controlled more frequently from motives of self-aggrandizement, than ardour for the public good, let us not forget to pay the tribute of justice to unfortunate monarchs. The castles of Berkley and Pomfret, and in a later age, the tower of London, witnessed the sufferings of Edward the second, Richard the second, and Henry the sixth, and were stained with their foul and nefarious murders. The temporising members of the parliaments, who had deposed them, denied them even the privilege of a common subject, and refused to hear them in their own defence. The act of deposition was virtually an order for their execu-

tion; since the experience of ages proves, that to a prince, when the allegiance of his subjects is withdrawn, the passage is short from the throne to the grave. Although neither Edward nor Richard were much beloved in their prosperity; yet, by a revolution of opinions, natural to mankind, their sufferings, aggravated by an untimely and cruel death, excited the pity, and even the veneration of their subjects. The proceedings of the houses of parliament upon these trying occasions proved the wretched defects of the laws, and the uncontrolled power of the vindictive sword. The fortunate pretender to the crown, however black his perjury, or flagrant his rebellion, was allowed and even encouraged to trample upon the rights of humanity and justice, and wrest the sceptre from his lawful sovereign. Yet after these severe conflicts, the royal prerogative regained its ascendancy: the general liberties of the country were disregarded, and all orders of the state united with equal servility to prostrate themselves before the throne, and to present their swords and their estates to the disposal of the conqueror. A. D. 1485.

The succession of the Tudor family to the crown produced some important acquisitions to the cause of freedom. Henry VII. whose conduct was influenced by oppressive avarice as well as consummate policy, weakened the power of his nobles, by permitting them to alienate their lands. This privilege, as we have remarked in our survey of the feudal system, gave a deep and incurable wound to that institution, and raised the respectability of the lower orders of the community, who were enabled, by the increasing supplies of trade and commerce, to become the purchasers of estates. By dividing the lands among

many proprietors a competition of small interests was produced; and those great and formidable confederacies of the aristocratical power, which had so frequently excited the alarms of kings, and subverted the throne in former ages, were prevented by this salutary measure, or at least rendered very difficult to be formed.

The conduct of HENRY VIII. exhibited a perpetual struggle of violent passions. The condemnation of two of his queens, of the gallant and accomplished Lord Surry, and of the facetious and learned Sir Thomas More, must consign him to the hatred of all posterity. A. D. 1509. Rapin, vol. i, p. 794, &c. Carte, vol. iii, p. 1, &c. Hume, vol. iv, p. 35. His passion for the beautiful and unfortunate Ann Boleyn induced him to free his kingdom from the shackles of papal supremacy, and introduce the reformation of religion. This event formed a new and extraordinary epoch in the English history. It repressed the inordinate power of the clergy, abolished the monastic orders, and, by founding religious principle upon reason and scripture alone, improved the manly seriousness and inherent dignity of the British character. The reformation was highly favourable to civil as well as religious rights, and encouraged that spirit of free inquiry, from which it derived its origin. Men, who had the intrepidity to demolish the fabric of popery, supported as it was by the antiquity of its establishments, the splendour of its ceremonies, and the sacred character of its ministers, were not to be checked in their researches into the imperfections and abuses of government. The seeds therefore of political innovation were deeply sown; and although they were for some time checked in their growth, as all

orders of his subjects bowed with the most abject servility before this impetuous and tyrannical monarch, yet in succeeding times their fruits sprung up in the greatest abundance.

Splendid as the reign of ELIZABETH appears, with respect to her transactions with foreign countries, she inherited the temper of her father: the imperfections of her mind were those for which the Tudor family was remarkable, and she ruled with the most despotic sway. A. D 1558. Uncontrollable in the indulgence of her passions, and by turns the slave of love and hatred, she sentenced her favourite Essex to death, and consigned to a miserable and tedious imprisonment, and finally to the axe of the executioner, a cousin and a sovereign, whose charms excited her envy, and the suspicion of whose conspiracies provoked her revenge. Mary, queen of Scotland, many particulars of whose history are perplexed by contradictory accounts, and involved in obscurity, has been made the object of admiration to succeeding ages, as much, perhaps, on account of her misfortunes, captivity, and cruel death, as her incomparable beauty, sweetness of disposition, and excellent understanding*. The nobles feared and venerated Elizabeth; and the members of her house of commons, more obsequious to her demands and caprice than the ancient parliaments of Paris ever were to the dictates of a French mo-

* The learned Camden, a contemporary writer, ascribes to her a constant steadiness in religion, a singular piety to God, an invincible greatness of mind, and a wisdom above her sex, besides her personal charms. Carte, as if enamoured of the subject, has drawn her character with a degree of eloquence far superior to his usual style. Vol. iii, p. 619. Appendix, p. 817.

narch, assembled only to learn and obey her will, and to tax their constituents for her support. Her subjects were exempted from the privileges and cares of political power; and, at once dazzled by the splendour of her court, and the success of her arms, the strength of her understanding, the extent of her learning, and the masculine intrepidity of her temper, were blind to her obstinacy, avarice, and cruelty.

James I. was remarkable for the mildness of his disposition, and the attention he always paid to removing the grievances of his subjects*, in which circumstance he afforded an illustrious contrast to his immediate predecessors. In his pacific reign many encroachments were made upon the royal prerogative; or rather all the different orders of his kingdom began to feel their own importance, and were determined to exert their power. A. D. 1602. The flourishing state of commerce raised the merchants to great respectability; and their rapid increase of wealth naturally claimed suitable distinctions and privileges. The members of corporations were active in augmenting their rights; and the king, by an impolitic imitation of his predecessors, added to their number. The citizens of London were not so blinded by the condescension of their royal master in becoming a member of a company of merchants as not to solicit large concessions from the throne. The spirit of fanaticism, discontent, and ambition, prevailed in the house of commons; and all the actions of the king, and his immediate successors, their folly or wis-

* "Sir Edward Coke, at a time when he was out of favour and a malecontent, declared, that he never knew any complaint made to the king of any abuse out of parliament but he gave orders immediately to have it reformed." Carte, vol. iv, p. 129.

dom, their virtues or their vices, were equally exposed to complaint and opposition. A. D. 1625. The caprice of his temper, and the unsteadiness of his conduct, appearing at one time resolved upon measures, which at another he retracted; writing one day to his house of commons in a peremptory strain, and soon after sending them letters replete with concession and apology; gave great advantage to the artful supporters of the puritanical party, and encouraged them in the pursuit of their dark machinations against church and state. Carte, vol. iv, p. 128.

Such was the threatening aspect of affairs, when the amiable and accomplished CHARLES assumed the reins of government. Carte, vol. iv, p. 606. It was his peculiar misfortune to ascend the throne at a period, when no experience of his predecessors could be fully conclusive, as to the measures of state most proper to be adopted; and when the constitution of the country was in reality undergoing an alteration, while it appeared to be the same as in preceding times. Those who succeeded him discovered the change, and took the proper means to prevent its unhappy consequences: but the discovery, though afterwards easy to be made, was perhaps at that time placed out of the reach of human sagacity. The good qualities of Charles were more calculated to accelerate than to retard the fury of the storm, which threatened, and soon burst around him. Too scrupulous an adherence to his rights as a king, and his extraordinary zeal for the church of England, contributed to introduce the train of events, which proved so fatal to himself, and so disastrous to his country.

In the early part of his reign, he was induced to exercise with too much severity that undefined prero-

gative, over the odious part of which the cautious Elizabeth had drawn a veil, but which her successor James had exerted with ostentatious parade upon trivial occasions. However inquisitorial the constitution of the star chamber and the high commission court was, or however rigid the punishments, which they denounced against state offences; their authority was fully sanctioned by ancient customs. Few if any clamours had been raised against their proceedings during the reigns of former sovereigns. But, unhappily for Charles, the decrees of the star chamber at first excited popular invectives and tumult, and finally provoked a steady and determined opposition. The people called with a peremptory voice for a general redress of grievances. It ought for ever to be remembered, that this call was obeyed, and that the fullest concessions were made on the part of the king previous to the great rebellion. But as suspicions were entertained of the sincerity of his declarations, his sacrifices to the parliament, connected with some rash actions and unguarded expressions, were considered rather as the result of compulsion than of choice. Cromwell, Fairfax, Ireton, and all the popular leaders, therefore, failed not to embrace an opportunity so favourable to their ambition. They fired the minds of their party with their own fanaticism, and plunged the nation into all the horrors of a civil war. The refusal of Charles to resign the appointment of officers in the militia, was a signal for the commencement of hostilities; and the royal sword was finally drawn for the maintenance of what the king deemed a just prerogative, long after the parliament had recourse to arms. The last scene of this tragical period is such as the humane historian must lament to record, and the friend to

regal government must peruse with reluctance and horror; for it was closed with the solemn mockery of an illegal trial, and the murder of a monarch upon the scaffold.*

The violent convulsion, which subverted the throne, afforded an ample field of action to the abilities of the politic and hypocritical CROMWELL. He not only sought his safety in the destruction of the king, but established a complete despotism upon the ruins of the regal power. Under his conduct the army, as the prætorian bands had acted in the Roman empire, overawed the clamours of contending factions, and gave a master to their distracted country. The talents,

* January 30, A. D. 1649.

Excidat illa dies ævo, nec postera credant
Sæcula, nos certe taceamus, & obruta multa
Nocte tegi propria patiamur crimina gentis.

Lord Clarendon concludes his character in these words: "He was the worthiest gentleman, the best master, the best friend, the best husband, the best father, and the best christian, that the age he lived in produced."—Clarendon's History, vol. iii, p. 199. This eminent writer is supposed by some to have recorded rather a vindication of Charles than an impartial History of the Rebellion: but a proper examination of his work will show that he was not much influenced by any unfair bias in favour of the unfortunate monarch. There are, it is true, some palliations and softening expressions with respect to the king: but Clarendon has given as free an opinion of the origin of the Civil War, as any republican could have done. Speaking of the illegal proceedings of the star chamber, he says, "those foundations of right by which men valued their security, to the apprehension and understanding of wise men, *were never more in danger* of being destroyed." Book I, p. 67.

courage, and political skill of the protector shone equally in his conduct at home, and in his transactions abroad; and no prince who ever swayed the sceptre of this nation impressed the potentates of Europe with a more lively sense of the energy of the English councils, and the terror of the English arms. To add to the wonders of his extraordinary history, amidst the alarms and the exertions of returning loyalty, he died a natural death, while he was attempting to convert a military government into one more permanent and more congenial to the temper of his countrymen.*

The conduct of the parliament after the restoration, A. D. 1660. at first sight appears to have been highly inconsistent. In the former part of the reign of Charles II. he was flattered by their most abject devotion to his will; and towards the conclusion of it, he was assailed by their determined opposition. But the apparent inconsistency of their conduct may be reconciled by adverting to the alteration of circumstances. The people, rescued from the despotism of Cromwell, and the oppression of his emissaries, were led, by the extravagance of their joy, after the reestablishment of the ancient family, to express the most complete submission to the will of their sovereign, and to testify the most ardent wishes to exalt the crown above the attack of popular rage. But when the projects of the

* His character by Lord Clarendon is thus concluded: "In a word, as he was guilty of many crimes, against which damnation is denounced, and for which hell fire is prepared; so he had some good qualities, which have caused the memory of some men in all ages to be celebrated: and he will be looked upon by posterity as a *brave wicked man.*" History of the rebellion, vol. iii, p. 509.

king to introduce popery and arbitrary government were detected, they suddenly awoke to a full sense of a danger, alarming as that which they had recently escaped.

The tide of popular opinion therefore turned with violence against the king, who with his brother, the duke of York, was nearly carried away by its current. The commons boldly exerted their privileges. To the attention which they paid to the oppression of an obscure individual, England is indebted for the final improvement of the act of *Habeas Corpus*, which rescues the prisoner as well from the delay of trial, which the ministers of the crown may devise, as from the hardship of confinement out of his native country.* This statute may be regarded as an invaluable supplement to magna charta; and the attentive reader of our history will not fail to remark, that such measures as these were taken to extend the sphere of liberty, during the reign of arbitrary princes. A. D. 1684. This spirited house of commons impeached the earl of Danby, who had basely been instrumental in making his master a pensioner of France; they declared their hostility to popery, and deliberated upon the exclusion of the duke of York from the crown, in consequence of his avowed attachment to that religion, and his marriage with a papist.

The death of the witty and dissipated Charles II. while annulling the charters of great towns, and meditating schemes in order to make future parliaments obsequious to his inclination, saved him from the resentment of an incensed people. The conduct of

* A. D. 1679. Hume, vol, viii, p. 107. Letters of Junius, p. 226. De Lolme, p. 192, 362, 486. Rapin, vol ii, p. 675, 707. Earl of Danby. Hume vol. viii, p. 85.

James II., congenial in his principles, and more bold in the avowal and the exution of his designs than his brother, met with its due reward. A. D. 1684. The established religion of the country was insulted by the erection of a popish chapel in the midst of the royal camp; the rights of election were infringed by the despotic appointment of a popish president to Magdalen college in the university of Oxford; the privileges of parliament were violated by a standing army, maintained in the time of profound peace, without their consent; and the exercise of the right of subjects to present petitions to the king was punished by the imprisonment of six bishops in the tower. Popery and slavery seemed to be again returning with hasty steps; and the spirit of determined opposition was roused to check their advances. WILLIAM, prince of Orange, descended from the illustrious house of Nassau, grandson of Charles I. was invited to share the throne with Mary, the daughter of James. The king, struck with consternation at the desertion of his army, his fleet, and even his own children, threw up the reins of government, and was indebted to the clemency, or perhaps the policy of his enemies, for a secure escape into France.

The reign of the Stuarts consisted in a continued struggle for power between the monarch and his subjects. The public mind was kept in a constant state of fermentation; and the times, however favourable to the exercise of political skill and courage, seemed to allow no leisure for the cultivation of the intellectual powers, or the growth of knowlege, which is usually the improvement of tranquillity and repose. Yet, amid the turbulence of this period was founded the Royal Society, an institution, which has been par-

ticularly favourable to the promotion of science and genuine philosophy. The revolution was a most distinguishing epoch in the history of England, as it altered the line of succession by a power immediately derived from the people, and gave such an ascendant to their liberty, as to extend its influence, secure its continuance, and place it upon a solid and durable foundation. The means by which it was accomplished, without the effusion of blood, at least upon English ground, were as extraordinary as the importance of it was great, not only to Britain, but to the common interests of Europe.

At the auspicious moment, when William III. gave his assent to the bill of rights, the fabric of the constitution was completed. The most valuable parts of the feudal system, and the recent plans of liberty, were consolidated in one consistent and uniform mass of jurisprudence. A. D 1688. The privileges of the people, and the prerogative of the king, were weighed in the balance of justice; and were ascertained and defined, not so much by prescription on the one hand, or the predominance of a democratic party on the other, as by the more enlarged and moderate principles of reason and expediency. The important change then introduced into the succession to the throne was calculated to exclude the repetition of such an event, against which the laws had not before provided a remedy. That the crown should never more be possessed by a papist, was an important declaration made by the bill of rights: and with such alarming apprehensions did the revolutionists view a monarch of that description, that they thought it necessary to deprive the future kings of England of the right given to every subject of choosing his own religion. The arguments

in favour of this restriction were cogent and irresistible. The religious liberty of the people was regarded as intimately connected with their civil welfare. A recent example had taught them, that the character of a popish prince was inseparable from that of a despot; and they wished for ever to prevent the repetition of the wrongs and outrages, which had sprung from the union of bigotry with arbitrary power. Influenced by a spirit of moderation, and rather seeking a remedy for *past abuses*, than framing a government upon principles of *hazardous* and *untried theory*, they made few changes in the established laws and statutes. But they thought it a duty incumbent upon them to embrace this opportunity of giving their due strength, vigour, and authority, to the liberty of the subject. Accordingly, the ascendancy of the law above the will of the king was fully declared, his dispensing authority was judged illegal, and the undoubted privileges of the subject to petition for a redress of grievances, and to provide for his self defence, were guarded against violation, in the most clear and positive terms. The king was invested with every power, which his predecessors had exercised over parliaments, corporations, the army, and the navy, except the power of doing injury; and his subjects were laid under those equitable restraints, which were most consistent with rational liberty. And to complete their independence, the privileges of Englishmen were not solicited as a favour, but asserted in the most emphatical terms, as an undoubted and inherent right. Allegiance and protection were declared reciprocal ties depending upon each other, and the dignity and honour of the King were involved in the security and happiness of his subjects.

The reign of QUEEN ANNE was distinguished by a successful war against France, in which John duke of Marlborough, one of the greatest generals, not only of his age, but of modern times, defeated by an uninterrupted succession of victories at the head of the allied armies of England, Germany, and Holland, the attempts of Louis XIV. to obtain universal sovereignty; and raised the renown both of himself and his country to the highest pitch of glory. This reign is also rendered memorable by the union of England and Scotland, and their joint representation in the parliament of Great Britain—measures which the regularly increasing and uninterrupted prosperity of both countries has amply justified. A. D. 1706. The death of Queen Anne was followed by the succession of the house of Hanover to the throne; and each descendant of this illustrious family, particularly the REVERED SOVEREIGN who now holds the sceptre of the United Kingdom, has ever protected the civil and religious rights of his subjects from violation, and built his glory upon the firmest basis, by reigning in the hearts of his subjects, and maintaining the most endearing and the most exalted of all human charcaters—even that of being the FATHER OF HIS PEOPLE.

Expedient as the steps taken at the revolution might be to settle the government, it is unfortunate for the tranquillity of the country, that the event gave rise to political divisions. The whigs and the tories have since divided the kingdom, and kept alive the flames of party spirit. Possibly, however, in a free country like our own, where a wide field is opened for a rivalry of talents, and a competition of interests, this counterbalance of parties may prevent evil, if it does not produce good. If the current of opinion

flowed only in one stream, the vigilance of government might be relaxed, the arrogance of men in office might want a salutary check, or their supineness be deprived of a stimulative; and no place could be found for that exertion of abilities, which often takes its rise from opposition. Whatever be the party, under which they may be enlisted, we may be certain the men in power can only secure the great and permanent prosperity of the nation by a conscientious, upright, and magnanimous discharge of their duty. The history of the two parties is recorded with singular correctness by Rapin, a dispassionate and candid foreigner.* His detail affords sufficient proofs how impolitic as well as

* See Rapin, vol. iii, p. 796. Of his impartiality and candour there are many instances. In his Life of Edward III. vol. i, p. 418, and p. 436. See his remarks on the treaty of Bretigny—his Letter to Robethon at the end of vol. ii, and p. 807 of the Dissertation on whigs and tories. To extricate himself from some historical difficulties, he has laid down *two* excellent rules. He remarks that the national prejudices of our historians are very rooted, chiefly upon two articles—the violation of treaties, and the success of battles. For the former, where the truth was no other way to be discovered, he has frequently made use of a very natural maxim, viz. that it is not likely that the party to whom a treaty is advantageous, should be the first to break it. As for the second article, nothing is more common than to see historians hesitate to own their nation vanquished, and they think it incumbent upon them to diminish their losses, or magnify their victories. On these occasions, when Rapin could not fix the success of a battle by the consequences, he has taken care to inform the reader of the disagreement between the Historians. See Preface, p. 4.

wicked it is in every statesman, while he holds the honours, and treasures of the kingdom in his hands, not to prefer disinterestedness to corruption, independence to servility, and public good to every consideration of partial and private advantage.

CHAPTER II.

THE SUBJECT CONTINUED.

THIS transient and superficial view of the progress of the constitution has enabled us to discover, that the rays of true liberty first illuminated our Saxon ancestors; the despotism of the Normans suddenly obscured this auspicious morning; but the sun of freedom broke through the gloom, spread its beam over Runny Mead and the plains of Merton, where the barons nobly vindicated their ancient rights from the oppression of their monarchs. The storms of civil war between the houses of York and Lancaster raged with violence for a time, and darkened the political horizon with the most tempestuous clouds. But the glorious sun of liberty again displayed itself at the reformation, was again obscured by the conflict of king and people, and finally shone forth with meridian glory at the revolution.

The gradual progress of liberty in England was not more beneficial with respect to the government of the country, than conductive to the enlargement and freedom of opinion. The powers of the mind were directed with ardour and success to the examination of those rooted prejudices, which had been long received without sufficient reason. The struggles of contending

factions gave birth to the exertions of Milton, Sidney, Locke, and Somers. These writers were the founders of new political schools; and we may rank among their disciples a Montesquieu, a Rousseau, a Voltaire, a Franklin, and a Washington. If ever the American is disposed to boast of the freedom of his country, let him recollect, that the lessons of that freedom were taught him by the parent state. When the French maintain, that the plans of any of their varying forms of democracy, since the revolution of 1789, have originated solely in the abstract principles and deduction of reason, do they not forget that Britain first suggested to their legislators their best and most approved maxims of government: and that even at the present moment, while they boast of enacting the most equitable laws, they transcribe the statute book of this country? When an Englishman asks these questions, he indulges much nobler and more generous feelings than those of vanity or arrogance; for he experiences the most genuine satisfaction to observe, that the blessings he enjoys are not limited to his own country; and while he protests against any deductions which may be made from the principles of his own government, that may disturb social order, and lead to anarchy and confusion, he is happy whenever they are so judiciously reduced to practice as to promote the general welfare of mankind.

In tracing the stream of liberty from its lowest ebb to its highest tide, the different events, which have been brought forward in this short detail, are designed to suggest, rather than to state a variety of useful reflections. It is evident that the British constitution has reached its present state of improvement, not so

much in consequence of the deep and refined speculations of philosophers and politicians, as by the concussion of discordant interests, and the hostility of contending parties. The struggles for power before the revolution were very numerous, and in some of them the rights of *kings* were as flagrantly insulted as those of the *people*. The measures frequently employed for the destruction of the constitution, particularly in the reign of James II. were the means that ultimately strengthened its powers, and gave fresh vigour to its operations. The auspicious effects and remote tendency of many transactions, which contributed to its improvement, were probably neither foreseen by the agents, nor formed any part of their plans.

From the reign of John to that of William III. every attempt in the form of war, treaty, and accommodation, has been made to narrow the circle, and define the power of the royal prerogative; and the designs of every true patriot, whenever sincerely directed to the promotion of the good of the community, have ever been ultimately crowned with success. In a period the most disastrous in the modern part of our history viz. the usurpation of Cromwell, the rights of property, which is the basis of our political establishment, were grossly violated by a democratic faction. The populace were roused to arms to serve the ambitious purposes of hypocritical tyrants, and the monarchy was overturned. The events of past ages are recorded in vain, unless they afford useful lessons for the instruction of ourselves and our posterity.

The BRITISH CONSTITUTION deserves the grateful homage of every one who shares its blessings, and presents to the attention of the political speculatists, both

of our own and other countries, the fairest theme of admiration and applause*.

All the advantages of a representative republic are derived from the right of the people to choose their own members of the *house of commons*, and from the important privileges which those members enjoy.

The *house of lords* forms a middle link of the political chain between the king and the people, and is peculiarly useful, when regarded as a barrier against the usurpations of arbitrary power on the one side, and the encroachments of popular licentiousness on the other. Considered as an assembly appointed for

* "The English, said the illustrious *President de Montesquieu*, are the most free people that ever were upon earth. England, of all the nations in the world, is that which has known how to make the most (all at the same time) of those three great things, religion, commerce, and liberty." *Brissot*, who perhaps paid even with his life for the opposition of his actions to his opinions, says in his letter to his constituents, "The English government, which I had investigated upon the spot, appeared to me, in spite of its defects, a model for those nations that were desirous to change their government. The work of M. *De Lolme*, adds he, which is no more than an ingenious panegyrick upon this excellent constitution, was at that time in the hands of the learned few. It ought to have been made known to my countrymen; for to make it known was to make it beloved." Fas est et ab hoste doceri. Seward's Anecdotes, vol. ii, p. 386, &c. "Happy constitution! which the people who possess it did not suddenly obtain: it has cost them rivers of blood; but they have not purchased it too dear." *Vattel* in his Law of Nations. See the equally impartial and honourable testimonies of *Philip de Comines*, *Rapin*, *De Lolme*, *Frederick of Prussia*, *Beaumelle*, the authors of the Encyclopedie Methodique, &c. &c.

the revision of such measures, as may be brought forward with precipitation, either by the king or the house of commons, they are of the highest importance to the state.

As the *king* is wholly dependent upon the other branches of the constitution for pecuniary aid, he is debarred from the execution of frivolous or ambitious projects, even were his ministers inclined to suggest them; and can only execute those plans, which are determined by the voice of the majority of his parliament to be conducive to the good of the nation.

The constitution of England includes the essence of the three different forms of government which prevail in the world, without their attendant disadvantages; for we have democracy without confusion, aristocracy without rigour, and monarchy without despotism. These principles are so compounded and mixed, as to form a political system, which is capable of producing more freedom, and true independence, than the renowned commonwealths of Athens and Rome could boast, or perhaps than was ever enjoyed by any other state in its highest prosperity and perfection.

Here then we behold that theory reduced to practice, which *one* great politician of antiquity pronounced to be the best; and which *another* esteemed to be a fair subject of commendation; and yet if it ever should exist, he maintained that it could not be permanent. The duration, however, of our constitution for so long a period of time, has happily proved, and, by the favour of a gracious Providence, it is devoutly hoped will continue to prove to the most remote times, the fallacy of his prediction.*

* "Esse optime constitutam rempublicam, quæ ex tribus generibus illis, regali, optimo, et populari, fit modice

This is the source of social order and comfort, and from it flow the invaluable rights of free-born Englishmen. These rights consist in the full enjoyment of security, liberty, property, and the impartial administration of the laws. The Englishman, whenever he is attacked, is not condemned to silence, or left unprotected. He can exercise a censoral power over his enemies, and speak, or publish his sentiments to the world. The courts of law are open to his complaints, and he may throw himself with perfect confidence upon the upright and impartial deliberations of a jury of his equals. He can petition the king and parliament for a redress of his grievances, and he can keep arms for his defence suitable to his rank and condition. He thus enjoys all the privileges, which the social compact, when properly understood, can bestow, and his sphere of action is as enlarged as a good citizen can desire. It is indeed only confined within such limits, as guard him from actions, which would prove dishonourable to himself, and pernicious to the public. See Blackstone's Comment. vol. i, p. 50, 127. vol. iii, p. 60. vol. iv, p. 267, &c.

This establishment is well adapted to the manners and character of the people. The freedom of spirit,

confusa." Cicero Fragm. de Repub. lib. ii. "Cunctas nationes et urbes populus aut primores, aut singuli regunt: delecta ex his, et constituta reipublicæ forma laudari facilius quam evenire, vel si evenit, haud diuturna esse potest." Tacitus, Ann. Lib. iv. The original idea is to be found in Polybius: lib. vi. p. 628. vol. ii, Edit. Casaub. Upon the nature of different governments, their origin and revolutions, this profound author, whose works ought to be carefully studied by every statesman, has made some judicious remarks in his sixth book.

which forms its basis and produces its glory; and the rational checks, which are laid upon the different branches of the legislature, accord with that complexional boldness of disposition, which is corrected by our national sedateness and deliberation of character. The temper of the people, like their climate, is variable and cloudy, continually exhibiting the most striking contrasts: but their principles of action, like those of their government and their religion, are permanent and fixed.

Stern o'er each bosom reason holds her state,
With daring aims, irregularly great;
Pride in their port, defiance in their eye,
I see the lords of human kind pass by;
Intent on high designs, a thoughtful band,
By forms unfashioned, fresh from nature's hand.
Fierce in their native hardiness of soul,
True to imagin'd right, above control:
While even the peasant boasts those rights to scan,
And learns to venerate himself as Man*.

The mild administration of justice, and the indulgence of the law to the accused, is correspondent with that national benevolence, which, at the call of distress and indigence, pours forth a stream of bounty with a degree of copiousness unknown in any other country. The equality of the laws, extending their unbounded control, their restraints, and privileges, from the throne to the cottage, cherishes the native dignity of the Briton, and increases the intrepidity of his character. This equality is moreover an incentive to every useful enterprise, and encourages that activity of mind and body, which is natural to man. In the extension of trade and

* Goldsmith's Traveller.

commerce to every quarter of the globe, in the perfection of manufactures, in the works of art, literature, and science, and in the execution of great projects which are recommended by the prospect of private advantage or public utility, the Englishman is ardent and indefatigable, and outstrips in the race of competition most of the inhabitants of the earth.

Such is the prospect of the British government, and such are its transcendent advantages and benign effects. Still, however, we are accustomed to hear complaints of the prevalence of various political evils, and public grievances. There are some indeed, which the enemies of their country exaggerate with a malevolent pleasure, and others which its friends acknowledge with sincere concern. But these are not the faults of the constitution; for if they were, they could without difficulty be removed. And this displays the advantages arising from our political system in a new and striking light. For does it not possess a principle of amendment, and a capacity of melioration? Without requiring any other aid, can it not supply a remedy for every disease, which it is in the power of any human system to alleviate or cure? The three great branches of which it consists, the king, the lords, and the commons, can of themselves revise what is obsolete, correct what is wrong, extend what is partial, and supply what is deficient in the laws and constitutions of the state. They can remove the obstructions which impede the progress of the political machine; they can give new strength to its various parts, and new velocity to its motion. And the acts of parliament which are passed every session, adapted to the particular circumstances and necessities of the

times, are conspicuous and glorious proofs of this energetic and beneficial power.

Have we not therefore, I may confidently ask, abundant reason to glory in the name and in the privileges of Britons? Has not Providence showed its peculiar kindness in placing us in this favoured island, and sheltering us under the protection of this most excellent system? Let us cast our eyes around the globe, survey the mighty empires of the world, and contemplate the forms of government, by which they are distinguished; and then let us ask, if they can supply us with a superior, or an equal share of political good. From the arbitrary sway of a Russian Czar, or a Turkish Sultan, an Englishman turns with aversion: and with what eyes can he survey the inhabitants of other countries, with whom he has a closer relation from similarity of manners, or vicinity of situation? They can excite no emotions but those which increase his attachment to his own country—a country which has from generation to generation been favourable to the progress of that *true liberty*, which in ancient times showed, and only showed, herself for a short period to the brave and ingenious nations of the south of Europe. Short was her influence in polished Athens, short in martial Rome. Invisible to the world for ages, during the baleful prevalence of general tyranny, superstition, and barbarity, she at last appeared upon the shores of Britain; and finding the character and the genius of the people favourable to her great designs, here she fixed her abode, and developed her matchless plan. Here she seats a king upon the throne, whose happiness is centered in that of his subjects; and one of the noblest and most illustrious acts

of whose reign has been to render *judges*, the dispensers of the laws, perfectly independent of his will. Here she establishes the members of the houses of parliament, loyal, enlightened, and magnanimous. The expression of their united will is equal law, justice, toleration, security, order, and happiness. The rulers and the people, both those who give, and those to whom this happiness is imparted, deserve it the more, as it is their ardent wish and uniform endeavour to communicate the same blessings to others, which they enjoy themselves. In whatever regions of the globe the British commerce flourishes, are also felt the happy effects of the British polity. From the bleak mountains of Scotland, to the sunny shores of Malabar, is diffused its benign influence; and no place attests the power of Britain, which does not equally witness the mildness of her government, and the excellence of her laws.

And if more considerations can be wanted to endear our country and its political institutions to us, they may arise from the recollection of the great and extraordinary events which have taken place since the French revolution. Upon the continent we have seen the *Genius of innovation flying his destructive work*, overturning some governments by open war, and undermining others by secret plots. At home, we have witnessed the conflicts of party, and the conspiracies of faction; whilst our constitution, as "rocks resist the billows and the sky," has remained firm and uninjured. The storms which have assaulted it, and the shelter which it has afforded us, and all who have sought our shores for protection, have served to prove its unalterable stability, as well as its inestimable value.

The youth of the British empire will best show their conviction of these important truths by their persevering obedience to the laws, and their prudent use of the blessings conferred by their native country. But to defend this venerable edifice of liberty from the machinations of domestic, and the assaults of foreign enemies, is a charge which devolves more immediately upon the nobility, and upon those who are deputed to represent their countrymen in parliament. The conscientious and careful exercise of this most honourable trust is a duty which they owe to their ancestors, to themselves, and their descendants; and what labour can be too unremitting, what vigilance too active, what public spirit too exalted and ardent, to preserve unsullied and unimpaired a CONSTITUTION, which is the brightest ornament, the most glorious privilege, and the most valuable inheritance ever enjoyed by mankind?

Hail sacred Polity, by Freedom rear'd!
Hail sacred Freedom, when by law restrain'd!
Without you what were men? a grov'ling herd,
In darkness, wretchedness, and want enchain'd.
Sublim'd by you, the Greek and Roman reign'd
In arts unrivall'd: O! to latest days,
In *Albion* may your influence unprofan'd
To godlike worth the gen'rous bosom raise,
And prompt the sage's lore, and fire the poet's lays.

BEATTIE'S MINSTREL.

END OF THE HISTORICAL CLASS

CLASS THE FOURTH.

PHILOSOPHY.

CHAPTER I.

LOGIC, OR THE RIGHT USE OF REASON.

IT is a very great error for any one to suppose, that logic consists only in those formal debates and verbal disputations, in which the schoolmen and their followers consumed so much time in the dark ages, previous to the revival of classical learning. It is equally a mistake to imagine, that it is merely intended to teach the method of disputing by rules, and to instruct a young man to converse, not from a love of truth, but a desire of victory. As there is nothing more disingenuous than such a conduct as this, nothing more unbecoming a rational being, than to oppose sophistry to good sense, and evasion to sound argument, the logician disclaims this *abuse* of the principles of his art, and vindicates its rights by displaying its true and proper office. It is in reality capable of affording the most important assistance to the understanding in its inquiries after truth; it is eminently useful in the common affairs of life, and renders the greatest service to science, learning, virtue and religion.

Logic is *the art of forming correct ideas, and of deducing right inferences from them;* or it may be said to constitute the knowledge of the human mind, inasmuch as it traces the progress of all our information, from our first and most simple conceptions of things, to those numerous conclusions, which result from comparing them together. It teaches us in what order our thoughts succeed each other, and it instructs us in the relation which subsists between our ideas, and the terms in which we express them. It distinguishes their different kinds, and points out their properties; discovers the sources of our intellectual mistakes, and shows how we may correct and prevent them. It displays those principles and rules, which we follow, although imperceptibly, whenever we think in a manner conformable to truth.

The faculty of reason is the preeminent quality, by which mankind are distinguished from all other animals: but still we are far from finding that they possess it in the same degree. There is indeed as great an inequality in this respect in different persons, as there is in their strength and agility of body. Nor ought this disproportion to be wholly ascribed to the original constitution of the minds of men, or the difference of their natural endowments; for, if we take a survey of the nations of the world, we shall that find some are immersed in ignorance and barbarity, others enlightened by learning and science: and what is still more remarkable, the people of the same nation have been in various ages distinguished by these very opposite characters. It is therefore by due cultivation, and proper diligence, that we increase the vigour of our minds, and carry reason to perfection. Where this method is followed, the intellect acquires strength, and know-

ledge is enlarged in every direction; where it is neglected, we remain ignorant of the value of our own powers; and those faculties, by which we are qualified to survey the vast fabric of the world, to contemplate the whole face of nature, to investigate the causes of things, and to arrive at the most important conclusions as to our welfare and happiness, remain buried in darkness and obscurity. No branch of science therefore affords us a fairer prospect of improvement, than that which relates to the understanding, defines its powers, and shows the method, by which it acquires the stock of its ideas, and accumulates general knowledge:—this is the province of logic.

It is properly divided into four parts, viz.

I. PERCEPTION. II. JUDGMENT. III. REASONING. IV. METHOD.

In this division the logicians have followed the course of nature, as we shall find, if we reflect upon the conduct and progress of the understanding. These divisions have so close a connexion with each other, that it is scarcely possible to arrive at perfection in one of them, without the assistance of the others. To treat of perception we must make use of method; and in order to reason we must form every proposition with a due regard to rules.

I. PERCEPTION consists in the attention of the understanding to the objects acting upon it, whereby it becomes sensible of the impressions they make; and the notices of these impressions, as they exist in the mind, are distinguished by the name of *ideas*. If we attend carefully to our thoughts, we shall observe two fountains or sources of knowledge, from which the understanding is supplied with all its ideas, or

materials of thinking.—These are *sensation* and *reflection.*

Sensation is the source of our original ideas, and comprehends the notices conveyed into the mind by impulses or impressions made upon the organs of sense. Such are the perceptions of colours, sounds, tastes, &c. But we derive all these ideas, great as is their number, solely from external objects. Another source of impressions arises from the attention of the mind to its own perceptions, and considers the various modes, in which it employs itself concerning them. Thus we acquire the ideas of thinking, doubting, believing, &c. which are the different intellectual operations represented to us by our own consciousness. This act of the mind is called *reflection;* and it evidently implies sensation, as the impressions it furnishes proceed from the powers of the understanding occupied in the contemplation of ideas, with which it has been previously stored.

A proper consideration of these two sources of our thoughts will give us a clear and distinct view of the nature of the mind, and the first steps it takes in the path of knowledge. From these simple beginnings all our discoveries derive their origin; for the mind thus stored with its original notices of things has a power of combining, modifying, and placing them in an infinite variety of lights, by which means it is enabled to multiply the objects of its perception, and finds itself possessed of an inexhaustible stock of materials for reflection and reasoning. It is in the various comparisons of these ideas, according to such combinations as are best adapted to its ends, that we exert ourselves in the acts of judging and reasoning, enlarge our mental prospects, and can extend them in

every direction. Thus are we enabled to form a notion of the whole progress of the soul, from the first dawnings of thought to the utmost limits of human knowledge. And it is particularly to be observed, that among our numerous discoveries, and the infinite variety of our conceptions, we are unable to find one original idea, which is not derived from sensation or reflection; or one complex idea, which is not composed of these original ones. "Our observation employed either about external sensible objects, or about the internal operations of our minds, perceived and reflected on by ourselves, is that which supplies our understandings with all the materials of thinking. These two are the fountains of knowledge, from whence all the ideas we have, or can naturally have, do spring." Locke, book ii, chap. 1. see likewise book i, chap. 2. and book ii, chap. 1.

The ideas, with which the mind is thus furnished, fall naturally under two heads. First, those original impressions which are conveyed by sensation and reflection, and which exist uniformly and without any shadow of variety, and are called *simple ideas*, such as the ideas of colour, sound, heat, &c. And, secondly, those notions which result from the various combinations of simple ideas, whether they are supposed to co-exist in any particular subject, or are united together by the mind when it enlarges its conceptions. These are called *complex ideas*, such as a triangle, a square, &c. and are of two principal kinds; first, such as are derived from external objects, and represent those combinations of thought, which have a real existence in nature; of this kind are all our ideas of substances. Secondly, the conceptions formed by the mind itself, arbitrarily uniting and putting together its ideas. This

makes by far the largest class, and comprehends all those ideas, which may be properly termed our own. They are called *abstract* or *universal*, such as whiteness, beauty, melody, &c. and are produced in various ways; for either the mind combines several simple ideas together, in order to form them into one conception, in which the number and quality of the ideas united are principally considered, and thus we acquire all our compound notions; or it fixes upon any of our ideas whether simple or compound; or upon the ideas of substances, and omitting the circumstances of time, place, real existence, or whatever renders it particular, considers the appearance alone, and makes that a representation of all that are of the same kind; or, lastly, it compares things with one another, examines their mutual connexions, and thereby furnishes itself with a new stock of notions, known by the name of *relations*, which are proportional, as equal, more, less, &c. or natural, as father, mother, &c. or civil, as king and people, general and army, &c. This division of our ideas, as it seems to be the most natural, and truly to represent the manner in which they are introduced into the mind, will be found to include them in all their varieties.

We know that our thoughts, although so numerous and manifold, are all contained within our own breasts, and are invisible. But as the Supreme Being formed mankind for society, he has provided us with organs proper for framing articulate sounds, and given us also a capacity of using those sounds, as signs of internal conceptions. From hence are derived words and languages. See Locke on the Ends of Language, book iii, c. 10. For any sound being once determined upon to stand as the sign of an idea, custom by degrees

establishes such a connexion between them, that the appearance of the idea in the understanding always brings to our remembrance the name, by which it is expressed: and in like manner the hearing of the name never fails to excite the idea which it is intended to denote.

Definition *is the unfolding some conception of the mind by words, which answer to the term made use of as the sign of the conception*, "or it is the showing the meaning of one word by several other not synonymous terms." Locke, vol. i, p. 455. It furnishes us with the fittest means of communicating our thoughts; for if we were unable to impart our complex ideas to each other by the aid of definition, it would in many cases be impossible to make them known. This is evident in those ideas which are solely the offspring of the mind. For as they exist only in the understanding, and have no real objects in nature, in conformity to which they are framed, if we could not communicate them to others by description, they must be confined to the narrow limits of a single mind. All the beautiful scenes which spring from the fancy of a poet, and by his lively imagery give such entertainment to his readers, if he was destitute of this faculty of displaying them by words, could not extend their influence beyond his own breast, or give pleasure to any one, except the original inventor.

In our remarks upon language in general, we have adverted to the use and importance of definitions. Locke, book iii, chap. 4. To simple ideas we know them to be inapplicable: but as they are intended to make known the meaning of words, standing for all complex ideas, if we were always careful to form those

ideas with exactness, and to copy our definitions from them with precision, as a skilful painter does a good likeness; much of the obscurity and confusion of language, as it is used both in writing and conversation, might be prevented.

II. The mind being furnished with ideas, the next step necessary in the progress of knowledge is to compare them together, in order to judge of their agreement or disagreement. In this connected view of our ideas, if the relation is such as to be immediately discoverable by the bare inspection of the mind, the judgments thence obtained are called *intuitive*, from a word that denotes to look at, or into: for in this case a mere attention to ideas compared is sufficient to inform us how far they are connected or disjoined. Thus, "that the whole is greater than any of its parts" is an intuitive judgment, nothing more being required to convince us of its truth, than an attention to the ideas of whole and part. Intuition therefore is no more than an immediate perception of the agreement or disagreement of any two ideas. This is the first of the three foundations of our knowledge, upon which depends that species of reasoning, which is called demonstration. For whatever is deduced from our intuitive perceptions by a clear and connected series of proofs is said to be demonstrated, and produces absolute certainty. Hence the knowledge obtained in this manner is what we properly term SCIENCE, because in every step of the argument it carries its own evidence with it, and leaves no room for doubt. It is to demonstration that mathematical studies are indebted for their peculiar clearness and certainty.

The second ground of human judgment, from which we infer the existence of the objects which surround us, and fall under the immediate notice of our senses, is *experience*. When we behold the sun, or direct our eyes to a building, we not only have ideas of those objects, but ascribe to them a real existence independent of the mind. It is likewise by the information of the senses, that we judge of the qualities of bodies; as when we assert that snow is white, fire is hot, or steel hard. As intuition is the foundation of all scientific, so is experience the foundation of all natural knowledge. For the latter being wholly conversant with objects of sense, or with those bodies which constitute the natural world, and we can only discover their properties by a series of observations, it is evident, that in order to improve this branch of knowledge, we must have recourse to the method of trial and experiment.

The third ground of judgment is *testimony*. There are many facts, that will not admit an appeal to the senses. All human actions, when considered as already past, are of this description. As from the other two grounds are deduced scientific and natural knowledge, so from this we derive *historical*, by which is meant not only a knowledge of the civil transactions of states and kingdoms, but of all cases where the evidence of witnesses is the ground of our belief.

The act of assembling our ideas together, and joining or disuniting them according to the result of our perceptions, is called judgment; but when these judgments are expressed by words, they are called propositions. A *proposition* therefore is a sentence denoting some judgment, whereby two or more ideas are affirmed to agree or disagree. The idea of which

we affirm or deny any thing, and of course the term expressing that idea, is called the *subject* of the proposition. The idea affirmed or denied, as also the term expressing it, is called the *predicate;* and that word which in a proposition connects these two ideas is called the *copula;* and if a negative particle be annexed, we thereby understand that the ideas are disjoined. The substantive verb is commonly employed as the copula, as in this proposition; "God *is* omnipotent;" where the verb substantive represents the copula, and signifies the agreement of the ideas of God and omnipotence. But if it be our intention to separate two ideas, then, in addition to the verb substantive, we must also employ some particle of negation, to express this repugnance. The proposition "man is not perfect" may serve as an example of this kind; where the notion of perfection being removed from the idea of man, the negative particle *not* is inserted after the copula, to signify the disagreement between the subject and the predicate.

Propositions are *affirmative* and *negative*, *universal* and *particular*, *absolute* and *conditional*, *simple* and *compound*, and are generally divisible into *self-evident* and *demonstrable*.

When the mind joins two ideas, we call it an *affirmative judgment;* when it separates them, we denominate it a *negative judgment;* and as any two ideas compared together must necessarily either agree or disagree, it is evident that all our judgments are included in these two divisions. Hence likewise the propositions expressing these judgments are all either affirmative, or negative. An affirmative proposition connects the predicate with the subject, as "a stone is heavy;" a negative proposition separates them, as

"God is not the author of evil." Affirmation, therefore is the same as joining two ideas together, and this is done by means of the copula. Negation, on the contrary, denotes a repugnance between the ideas compared; in which case, a negative particle must be employed, to show that the connexion included in the copula does not take place.

Our ideas according to what has been already observed, are all single as they enter the mind, and represent individual objects. But as by abstraction we can render them universal, so as to comprehend a whole class of things, and sometimes several classes at once, the terms expressing these ideas must be in like manner universal. Thus when we say, "men are mortal," we consider mortality not as confined to one, or any number of particular men, but as what may be affirmed without exception of the whole species. By this means the proposition becomes as general as the idea which is its subject; and indeed derives its universality entirely from that idea being more or less so, according as it may be extended to a smaller or greater number of individuals.

A particular proposition has some general term for its subject, but with a mark of limitation added, to denote that the predicate agrees only with some of the individuals comprehended under a species, or with one or more of the species belonging to a genus, and not with the whole universal idea. Thus, "some stones are heavier than iron;" "some men have an uncommon share of folly." In the last of these propositions the subject "some men" implies only a certain number of individuals comprehended under a single species.

We may observe therefore, that all propositions are either affirmative or negative; nor is it less evident, that in both cases they may be universal or particular. Hence arises that celebrated fourfold division of them into *universal affirmative*, and *universal negative*, *particular affirmative*, and *particular negative*, which comprehends all their varieties. The utility of this mode of distinction will appear more evident, when we come to speak of reasoning and syllogism.

Propositions are either *absolute* or *conditional*. The absolute are those, wherein we affirm some property inseparable from the idea of the subject, and which therefore belongs to it in all possible cases; as "God is infinitely wise,"—"Virtue tends to the ultimate happiness of man." But when the predicate is not necessarily connected with the idea of the subject, unless upon some consideration distinct from that idea, then the proposition is called conditional. The reason of the name is taken from the supposition annexed, and may be expressed as such; thus—"If a stone is exposed to the rays of the sun, it will contract some degree of heat."

Nothing is more important in the acquisition of accurate knowledge, than a due attention to this division of propositions. If we are careful never to affirm things absolutely, but when the ideas are inseparably united; and if in our other judgments we distinctly mark the conditions, which determine the predicate to belong to the subject, we shall be less liable to mistake in applying general truths to particular concerns of human life.

Propositions, when only two ideas are compared together, are in general called *simple*, because, having but one subject and one predicate, they are the effect of a

single judgment, which admits of no subdivision. But if several ideas present themselves to our thoughts at once so that we are led to affirm the same thing of different objects, or different things of the same object, the propositions expressing these judgments are called *compound;* because they may be resolved into as many others, as there are subjects or predicates in the whole complex determination of the mind. Thus, "God is infinitely wise and infinitely powerful:" here there are two predicates, "infinite wisdom" and "infinite power," both affirmed of the same subject: and accordingly the proposition may be resolved into two others, which distinctly affirm these predicates.

When any proposition is presented to the mind, if the terms in which it is expressed be understood upon comparing the ideas together, the agreement or disagreement asserted is either immediately perceived or found to be too remote from the present reach of the understanding. In the first case the proposition is said to be *self-evident*, and requires no proof whatever; because a bare attention to the ideas themselves produces full conviction and certainty. But if the connexion or repugnance comes not so readily under the inspection of the mind we must have recourse to reasoning; and if by a clear series of proofs we can ascertain the truth proposed, insomuch that self evidence shall accompany every step of the argument, we are then able to prove our assertion, and the proposition is said to be *demonstrable*. When we affirm, for instance, "that it is impossible for the same thing to be and not to be," whoever understands the terms used, perceives at the first glance the truth of what is asserted, nor can he bring himself to believe the contrary. But if we say, "this world had a beginning," the assertion is, indeed, equally

true, but shines not forth with the same degree of evidence. We find great difficulty in conceiving how the world could be created out of nothing, and are not brought to a full assent to the assertion, until by reasoning we arrive at a clear view of the absurdity involved in the contrary supposition. Hence this proposition is of the kind we call demonstrable, inasmuch as its truth is not immediately perceived, but yet may be made evident, by means of others more known and obvious, whence it follows as an unavoidable consequence.

III. Reasoning. It frequently happens, in comparing our ideas together, that their agreement or disagreement cannot be discerned at first sight, especially if they are of such a nature, as not to admit of an exact application to each other. It therefore becomes necessary to discover some third idea, which will admit of such an application, as the present case requires; wherein if we succeed, all difficulties vanish and the relation we are in search of may be traced with ease. This manner of determining the relation between any two ideas by the intervention of a third, with which they may be compared, is what we call *reasoning*, and is indeed the chief instrument, by which we extend our discoveries, and enlarge our knowledge. The great art consists in finding out such intermediate ideas, as, when compared with the others in the question, will furnish evident truths; because it is only by such means we can arrive at the knowledge of what is concealed and remote.

As in the second part of logic, our judgments, when expressed by words, were called *propositions*; so here in the third part, the expressions of our reasoning are termed *syllogisms*. By a syllogism is meant *an argument consisting of three propositions, so disposed, as*

that the last is necessarily inferred from the two which precede it.

In the composition of a syllogism two things are to be considered, viz. its matter and its form. The matter consists of three propositions composed of three ideas or terms variously joined. These three terms are called the *major*, the *minor*, and the *middle*. The predicate of the conclusion is called the major term, because it is commonly of a larger compass and more general signification than the minor term, or subject of the conclusion. The major and minor terms are called the *extremes*. The middle term is the third idea disposed in two propositions, in such a manner as to show the connexion between the major and minor terms in the conclusion, for which reason the middle term itself is sometimes called the *argument*. The proposition, which contains the predicate of the conclusion connected with the middle term, is usually called the major proposition; whereas the minor proposition connects the middle term with the subject of the conclusion, and is sometimes called the *assumption*. These rules are chiefly applicable to simple or categorical syllogisms, although every syllogism contains something analogous to them*.

Compound syllogisms are composed of two or more single ones, and may be resolved into them: the chief kinds are the *epichirema*, the *dilemma*, and the *sorites*. These figures are liable to abuse, and are often more specious than solid. The *epichirema* is an argument, which contains the proof of the major and the minor or both, before it draws the conclusion. This is frequently used in writing, in public speeches, and in common conversation, in order that each part of the

* Watt's Logic, p. 281, 301, &c.

discourse may be confirmed, and put out of doubt, as it proceeds towards the conclusion, which was chiefly designed. Thus the oration of Cicero, for Milo, may be reduced to this figure. "It is lawful for a person to kill those who lie in wait to kill him, as is allowed by the law of nature, and the practice of mankind. But Clodius lay in wait for Milo with that intention, as appears from his guard of soldiers and his travelling armed; therefore it was lawful for Milo to kill Clodius." The *dilemma* divides the whole argument into all its parts or members by a disjunctive proposition, and then infers something concerning each part, which is finally inferred concerning the whole. Thus Cicero argues to prove, that all pain ought to be borne with patience. "All pain is either violent or slight; if it be slight, it may easily be endured; if violent, it will certainly be short; therefore all pain ought to be borne with patience." But for this figure to be correct two things are required, 1. the full enumeration of all the particulars of a subject; 2. that it press the opponent only, and not be liable to be retorted upon the person who uses it. In the *sorites* several middle terms are used to connect one another successively in several propositions, till the last proposition connects its predicate with the first subject. Such is the jocular argument of Themistocles to prove that his little son governed the whole world. "My son governs his mother, his mother governs me; I govern the Athenians, the Athenians all Greece; Greece commands Europe, and Europe the world."

There is one kind of syllogism which is defective, and is called an *enthymem*, because only the conclusion with one of the premises is expressed, whilst the other is reserved in the mind. This forms the

most common kind of argument, both in conversation and in writing; for it would require too much time to draw out all our thoughts in regular order, according to mood and figure. Besides, we pay so much respect to the understanding of others, as to suppose that they are acquainted with the major or minor, which is suppressed or implied, when we state the other premises, and the conclusion.

With respect to the nature of *sophistry* or *false reasoning*, and the best methods of detecting its various artifices to impose upon the understanding, the popular treaties upon this subject, particularly *Logic, or the right use of Reason*, by Watts, and *the Conduct of the Understanding*, by Locke,* may be consulted to great advantage.

From the short survey we have taken, it appears, that logic, beginning with the first principles of thought, ascends gradually from one decision of the judgment to another, and connects these decisions in such a manner, that every stage of the progression brings intuitive certainty with it. It appears likewise that reason is the ability of deducing unknown truths from propositions that are already known; and that no proposition is admitted into a syllogism, as one of the previous judgments upon which the conclusion rests, unless it is itself a known and established truth, and the connexion of which with selfevident principles has been already traced.

If Aristotle was not the first, who reduced logic to a system, he was certainly the most eminent of logicians.† He claims the invention of the whole theory

* See particularly Section 42.

† For a very clear account of Aristotle and his works, see his Ethics and Politics by Dr. Gillies, 2 vol. 4to. 1797.

of syllogisms. He analysed them with astonishing subtlety, exhibited them to view in every shape, enacted the laws by which they are regulated, and invented all the forms into which they can be moulded. All subsequent writers upon the subject of dialectics have been indebted to him for nearly the whole of their systems. But after mankind had involved themselves in the labyrinths of Aristotelian disputation for near two thousand years, and perplexed their understandings to little purpose, the great lord Bacon proposed the method of induction, as a more effectual means of arriving at truth.*

By *Induction* is meant *a general inference drawn from several particular propositions.* This method has contributed very materially to the improvement of the arts, and the increase of knowledge, more particularly in the researches of natural philosophy. Upon the *use* of induction as applied to the general discovery of truth, the ingenious author of "The Chart and Scale of Truth" makes this excellent remark. "As induction is the first, so it is the most essential and fundamental instrument of reasoning: for as syllogism can never produce its own principles, it must have them from induction; and, if the general propositions, or secondary principles, be imperfectly or infirmly established, and much more if they be taken at hazard, upon authority, or by arbitrary assumption, like those of Aristotle, all the syllogising in the world is a vain and useless logomachy, only instrumental to the multiplication of false learning, and to the invention and confirmation of error. The truth of syllogisms de-

* Lord Bacon's general plan will be fully explained in the following chapter.

pends ultimately on the truth of axioms, and the truth of axioms on the soundness of inductions*."

IV. The fourth operation of the mind relates to the arrangement of our thoughts, when we endeavour to unite them in such a manner, that their mutual connexion and dependence may be clearly seen. To this operation the logicians give the name of METHOD; and in the course of their development of the powers of the understanding, they assign to it the last place.

In the arrangement of our thoughts, either for our own use, or when we intend to communicate and unfold our discoveries to others, there are two modes of proceeding, which are equally in our power to choose: for we may so propose the truths relating to any subject of inquiry or part of knowledge, as they presented themselves to the mind, and carry on the series of proofs in a reverse order, until they at last terminate in first principles: or, beginning with these principles, we may adopt the contrary method, and from them deduce, by a direct train of reasoning, all the propositions we desire to establish. From this diversity in the manner of arranging our thoughts originates the two fold division of method. When truths are so proposed, and put together as they were, or might have been discovered, this is called the *analytic method*, or the method of resolution; inasmuch as it traces things

* Chart and Scale of Truth, vol. i, p. 50. Syllogismus ex propositionibus constat, propositiones ex verbis, verba notionum tesseræ sunt. Itaque si notiones ipsæ (id quod basis rei est) confusæ sint & temere a rebus abstractæ, nihil in iis quæ superstruuntur est firmitudinis. Itaque spes est una in inductione vera. Baconi Novum Organ: vol. i, p. 275.

backward to their source, and resolves knowledge into its constituent parts, or in other words, into its first and original principles. When, on the other hand, they are deduced from these principles, and connected according to their mutual dependence, so that the truths first in order tend always to the demonstration of those that follow; this constitutes what is called the *synthetic method*, or method of composition. For we proceed by collecting the scattered parts of knowledge, and combining them into one system in such a manner, that the understanding is enabled distinctly to follow truth through all her different stages and gradations.

These two kinds of method admit of very easy illustration. In grammar, for instance, we first acquire the knowledge of letters, we combine them to make syllables, of syllables are composed words, and of words sentences and discourses.—This is synthetic method. But if we are better acquainted with the whole of a subject, than with any of its particular parts, we separate the whole into those parts, and thus gain a distinct knowledge of them. We know superficially, and by common observation, what plants are: but it is by the information which botany gives that we become conversant with their component parts, and distinguish the calix, the pistils, the stamina, the corolla, species, genera, &c. We may likewise have a general notion of an animal: but it is by the study of anatomy we gain a particular knowledge of its bones, veins, cartilages, and other parts.—This is analytic method. Watts's Logic, p. 340.

The analytic method has obtained the name of the the method of *invention*, because it observes the order, in which our thoughts succeed each other in the dis-

covery of truth. The synthetic is often denominated the method of *instruction*, inasmuch as in communicating our thoughts to others, we generally choose to deduce them from their first principles.

The four divisions of logic correspond with what we find passes naturally in our minds, and tend not only to facilitate the discovery, but to increase the love of TRUTH. By truth is here meant *the agreement of our ideas with the real state of things*, and as Wollaston well observes, "it is the offspring of unbroken meditations, and of thoughts often revised and corrected." This love is the most exalted principle of the human mind, and prompts us to its sublimest employments. It is pure, sincere, and intrinsically excellent; it frees us from the mists of prejudice, the fluctuations of doubt, and the perplexity of error. It is uninfluenced by the fear of man, the desire of praise, or the lustre of riches or power; and, as its greatest honour and most sublime purpose, it exalts our souls to a resemblance of the Author of nature himself, who is the fountain of light, happiness, and perfection. Where nothing influences, nothing agitates, nothing dazzles us in comparison with this love of truth, we become gradually more and more attentive, circumspect, and eager for solid proof and clear evidence; and we leave no methods untried, that may conduct us to right and just conclusions. If such be the ardour of the mind in pursuit of this inestimable treasure, how valuable must logic be, which is the instrument of its operations, and the clue to its discoveries! "However destined to be the guide of men, this truth is not bestowed with an unconditional profusion, but is hidden in darkness, and involved in difficulties; intended, like all the other gifts of heaven, to be sought and cultivated by all the

different powers and exertions of human reason." Chart and Scale of Truth, vol. i, p. 14.

After having acquired a proper knowledge of the distinctions marked out by logic in our ideas, and after having made ourselves acquainted with the rules prescribed for the exercise and the general improvement of our understanding, we ought to direct our attention to those authors, who have given the best examples of close and accurate reasoning. These examples should be interesting with respect to the nature of their subjects, that the scholar may be led to make a pleasing and easy application of the preceding principles. He will find them fully illustrated in the works of Bacon, Grotius, Locke, Clarke, and Paley. These profound and illustrious teachers will amply recompense his researches, and enlarge his knowledge, by giving him a clear and comprehensive insight into the most interesting topics. They will point out not only the proper employment of his reason, but its limits and boundaries. They will instruct him in its use and application to the sublime doctrines of revelation "They will convince him, that reason is not injured or disturbed, but assisted and improved by new discoveries of truth, coming from the eternal fountain of all knowledge." Locke, book iv, chap. 18.

It is the office of the logician to curb the sallies of the imagination, and keep it under the control and direction of reason. He must take care not to be too scrupulous in balancing probabilities, in indulging the refinements of subtlety, in being sceptical on the one hand, or dogmatical on the other; as these are great obstacles to the advancement of useful knowledge, and the successful and expeditious management of business. In order to think with correctness, and act with

energy, it is necessary to be furnished with good leading principles, and to proceed to every conclusion with cautious steps. The early discipline of reason, and the formation of regular habits of reflection, will greatly conduce to these purposes: and the chief end of logic is to invigorate this attention, and to confirm these habits.

Having thus endeavoured to point out THE APPLICATION OF RIGHT REASON to the discovery of truth, we may finally proceed to examine its *moral* effects; and to ask, in what particular mode of conduct we may see it most exercised, and best illustrated?

The answer to this question will lead us to consider its influence upon the different periods of human life. He who in his youth improves his intellectual powers in the pursuit of useful knowledge, and refines and strengthens his mind by the love of virtue and religion, for the service of his friends, his country, and mankind;—who is animated by true glory, exalted by pure friendship for social, and softened by virtuous love for domestic life; who to all these adds a sober and a masculine piety, equally remote from superstition and enthusiasm; that man enjoys the most agreeable youth, and accumulates the richest fund for the happy enjoyment of his maturer years.

He who in manhood keeps his passions and his imagination under due control; who forms the most select and virtuous friendships; who pursues fame, wealth, and power, only in the road of honour; who in his private conduct gives fullest scope to the tender and manly affections, and in his public character serves his country in the most upright and disinterested manner; who enjoys the goods of life with the greatest moderation, bears its ills with becoming fortitude; and in

the various circumstances of duty and trial, maintains and expresses an habitual reverence and love of God; that man is the worthiest character in this stage of life, passes through it with the highest satisfaction and dignity, and paves the way to the most easy and honourable old age.

Finally: he who in the decline of life preserves himself most free from the chagrin incident to that period, cherishes the kindest and most regular affections, uses his experience and authority in a tender and judicious manner, acts under a sense of the inspection, and with a view to the approbation of his maker; is daily aspiring after immortality, and ripening fast for its joys; and having sustained his part with consistency to the closing scene of life, quits the stage with a modest and graceful dignity: this is the best, the wisest, and the happiest old man. Dodsley's Preceptor, vol. ii, p. 379, &c.

Therefore the whole of youth, manhood, and old age, which is spent in this manner, is the best and happiest life,—the genuine result of RIGHT REASON.

They who thus conduct themselves are sensible that virtue is the best exercise and greatest improvement of their understandings, and constitutes the health, strength, and beauty of the mind. They are convinced that every deviation from this standard has a tendency to vice, misery, and folly; and that every advance towards it is an approach to wisdom, perfection, and happiness. The advantages, which such persons derive from logic in the improvement of their minds, and the regulation of their conduct, shows its most important use and entitles it to the highest praise.

CHAPTER II.

THE MATHEMATICS.

"NATURE, says Mr. Bonnycastle, bountiful and wise in all things, has provided us with an infinite variety of scenes, both for our instruction and entertainment; and, like a kind and indulgent parent, admits all her children to an equal participation of her blessings. But, as the modes, situations, and circumstances of life are various, so accident, habit, and education, have each their predominating influence, and give to every mind its particular bias. Where examples of excellence are wanting, the attempts to attain it are few; but eminence excites attention, and produces imitation. To raise the curiosity, and to awaken the listless and dormant powers of younger minds, we have only to point out to them a valuable acquisition, and the means of obtaining it. The active principles are immediately put into motion, and the certainty of the conquest is ensured from a determination to conquer. Of all the sciences which serve to call forth this spirit of enterprise and inquiry, there is none more eminently useful than the mathematics. By an early attachment to these elegant and sublime studies we acquire a habit of reasoning, and an elevation of thought, which fixes the mind, and prepares it for every other pursuit. From a few simple axioms, and evident principles, we proceed gradually to the most general propositions, and remote analogies: deducing one truth from another, in a chain

of argument well connected and logically pursued; which brings us at last, in the most satisfactory manner, to the conclusion, and serves as a general direction in all our inquiries after truth."

"And it is not only in this respect that mathematical learning is so highly valuable; it is likewise equally estimable for its practical utility. Almost all the works of art, and devices of man, have a dependence upon its principles, and are indebted to it for their origin and perfection. The cultivation of these admirable sciences is therefore a thing of the utmost importance, and ought to be considered as a principal part of every liberal and well regulated plan of education. They are the guide of our youth, the perfection of our reason, and the foundation of every great and noble undertaking."

Mathematics are calculated to produce effects highly beneficial to the mind. They make us fix our attention steadily upon the objects placed before us, and are therefore very properly recommended as the best remedy to cure an unsteady and volatile disposition. They teach us a method of clear and methodical reasoning, and coincide both in principles and rules with sound logic. They give a manly vigour to our understanding, and free us from doubt and uncertainty on the one hand, and credulity and rash presumption on the other. They incline us to a due assent conformable to the nature of things, and subject us to the government of strict reason. These studies are calculated to teach exactness and perspicuity in definition, connexion and conclusiveness in argument, carefulness in observation, patience in meditation; and from no exercises can the scholar go better prepared and disciplined to the pursuit of the higher branches of

knowledge. The benefit to be derived from them is thus stated by Mr. Locke: "I have mentioned mathematics as a way to settle in the mind a habit of reasoning closely, and in train; not that I think it necessary that all men should be deep mathematicians; but that having got the way of reasoning, which that study necessarily brings the mind to, they might be able to transfer it to other parts of knowledge, as they shall have occasion."*

The greatest perspicuity is found to prevail in every part of these researches. By reasonings founded upon lines and figures represented to the eye, the clearest truths are conveyed to the understanding. In one respect these studies claim the preeminence over all others; they reach the highest degree of evidence, by *which a position is not only proved to be true, but the contrary position is reduced to an absurdity—This is demonstration.*

"Such is the method of science, in which reason advances by a sublime intellectual motion from the simplest axioms to the most complicated speculation, and exhibits truth springing out of its first and purest elements, and rising from story to story in a most elegant progressive way into a luminous and extensive fabric. The certainty of self evidence attends it through every stage, and every link of the mathematical chain is of equal, that is, the utmost strength." Tatham's Chart and Scale of Truth, vol. i, p. 117.

* Conduct of the Understanding, vol. i, p. 339. "In geometria partem fatentur esse utilem teneris ætatibus: agitari namque animos, atque acui ingenia, et celeritatem percipiendi venire inde concedunt." Quint. lib. i, c. 10.

The name of *mathematics* was originally intended either to denote by way of eminence the high rank, which the sciences hold in the order of intellectual discipline, on account of their peculiar clearness and utility; or it was designed to convey an idea of their extent, as containing every kind of useful knowledge. According to their proper definition, they constitute *the science of quantity, either as subject to measure or number.* Their various branches are adapted to the common uses of life, and to the deepest and most abstract speculations. They are *pure* and *mixed.* The former consider quantity abstractedly, without any regard to *matter*, or particular bodies; the latter treat of quantity as subsisting in bodies, and consequently they are intermixed with the consideration of physics, or experimental philosophy.

Pure mathematics are Arithmetic, Algebra, Geometry, and fluxions: *mixed* consist chiefly of Mechanics, Pneumatics, Hydrostatics, Optics, and astronomy.

1. The experience of every day proves the utility of the art, which teaches the properties of numbers, and the method of employing them in all calculations with ease and expedition. The nations, which want *arithmetic*, as is the case with some tribes of American savages, who can scarcely reckon to twenty, are sunk in the lowest ignorance and barbarism. It is not only the indispensable instrument of private accounts and commerce, but it lays the only just foundation for political knowledge, as to the population, revenues, balance of trade, coinage, and military power of nations.

2. *Algebra* is an Arabic word; and is that peculiar kind of calculation, in which the known as well as the

unknown quantities are expressed by the letters of the alphabet. It is the art of computing by symbols. Algebra is one of the most important and useful branches of pure mathematics, and may be justly considered the key to all the rest. Geometry delights us by the simplicity of its principles, and the elegance of its demonstrations. Arithmetic is confined in its object, and partial in its application. But algebra, or the analytic art, is general and comprehensive, and may be applied with success in all cases were truth is to be obtained, and proper data can be established.

To trace this science to its origin, and to point out the various alterations and improvements which it has received, would exceed the limits of this work. It is of the highest antiquity, and has obtained the praise of all ages. The Greeks were acquainted with it, and applied it to the solution of certain curious and difficult problems; but it is to the moderns that we are principally indebted for the improvements of the art, and its great and extensive usefulness in every abstruse inquiry.

Algebra ought to be learned before geometry, because it facilitates the study of geometry; but geometry does not facilitate the study of algebra.

3. *Geometry*, whether derived from the Egyptians, or the Greeks, was originally, as its name denotes, the art of measuring the earth, or any distances or dimensions within it. In its present acceptation, it signifies *the science of magnitude in general*. Its application to the use and ornament of mankind is very important and extensive. Furnished with this assistance, geographers are enabled to ascertain the magnitude of the terraqueous globe, the extent of oceans, and the various divisions of the earth. Hence architects derive their

just measures and proportions for the construction of all kinds of buildings. By its assistance likewise surveyors measure land, and delineate the plans of towns. Hence fortification derives its strength, security, and systematic regularity, in the erection of forts, batteries, and all other military works; and hence the general is best enabled to draw the lines of regular encampments, or arrange his army in the most advantageous order of battle. From geometry is acquired an exact knowledge of perspective, and accuracy is given to maps and charts.

Trigonometry is a part of geometry, and is the art of finding the dimensions of the sides and angles of a triangle. It supplies fundamental rules for ascertaining every degree of distance and altitude. Without its aid, the magnitude of the earth, and the heavenly bodies, their distances, motions, and eclipses, would be utterly unknown. Its assistance is necessary to dialling, geography, navigation, and astronomy.

4. The most extensive, ingenious, and subtile of all the branches of pure mathematics are fluxions, which were entirely unknown to the ancients. They were invented by Sir Isaac Newton, one of the greatest mathematicians and philosophers that any age or nation has produced. Newton and Leibnitz contended for the honour of the invention, and it is probable that they both had made some progress in this new science before either knew what the other had done.

By means of fluxions we can resolve the most abtruse problems in pure and mixed mathematics. Since this noble invention some of the grand phenomena of the universe have been explained, and mechanical philosophy has attained a degree of perfection which algebra and geometry were not able to accomplish.

This doctrine has been applied by mathematicians to a variety of useful and important objects. The uses of fluxions are so many and so various that we cannot enumerate them in this work.

The doctrine of fluctions is founded upon this principle, that all magnitudes or quantities are supposed to be generated by motion. Thus, a line is supposed to be generated by the motion of a point, a surface by the motion of a line, and a solid by the motion of a surface. Algebra and geometry lend their aid to this sublime science.

Mixed mathematics, which constitute the pleasing and instructive branches of experimental philosophy, are next to be considered.

I. *Mechanics* is that science which treats of the motion and equilibrium of bodies. There are six simple instruments, which are called the mechanical powers; and by their combination, all machines, however complicated, are constructed. Their names are—*the lever, the wheel and axle, the pulley, the inclined plane, the wedge, and the screw.* However small the strength of man, considered in itself, may appear, his ingenuity has supplied him with the means of remedying its defects: by the friendly aid of the mechanical powers he is enabled to conquer the obstacles, which are opposed to him; to subdue, or to arm himself with the elements; and to make air, water, and fire, subservient to the purposes of his necessity, or his ornament. Skill in mechanics constitutes the great distinction between savage and civilized life, whether we consider their application to minute or to great objects, as aiding the ingenious artist in the construction of a clock or a watch, or as assisting in driving down

the piles for the foundation of a bridge, in boring cannon of the largest calibre, raising the ponderous anchor from the bottom of the ocean, working the complicated steam engine with the greatest effect, or investigating the motions of the celestial bodies.

II. *Pneumatics* relates to the nature and properties of the air: of this thin, compressible, dilatable and transparent fluid, few properties are known without the assistance of mechanics and geometry. Its elastic force, pressure, and weight have been discovered by experiments. The knowledge of these properties has led to many others equally surprising and useful, such as the gradual decrease of the density of the air in proportion to the distance from the surface of the earth, its various kinds, its essential service in the support of life, and the altitude of the atmosphere, which surrounds the globe.

III. The science of *Hydrostatics*, in its most extensive sense, teaches the pressure, equilibrium, and motion of fluids. To it belongs whatever relates to the resistance of fluids, with the art of weighing bodies, such as metals, minerals, &c. in water, in order to ascertain their specific gravity. It is of great use to mankind in the arts of life. To the sciences of pneumatics and hydrostatics we owe the pump, the fire engine, canals, aqueducts, &c.

IV. *Optics* is that science which treats of the nature and properties of light, and the various phenomena of vision. It is divided into *catoptrics* and *dioptrics*; the former of which treats of *reflected*, and the latter of *refracted* light; and they combine to instruct mankind in the management of this subtile fluid for the useful purposes of life. Upon the principles of optics are formed those

glasses, which assist the short-sighted, and remedy the infirmity of age, with respect to vision. This useful branch of science likewise supplies the defects of the naked eye, by the application of microscopes to examine the most minute, and of telescopes to survey the most distant bodies.

V. Of all the sciences, to which geometry imparts the solidity of its principles, and the clearness of its proofs the most beautiful and the most sublime is *astronomy*. This is perhaps the most exact and most definite part of natural philosophy; for it rectifies the errors of sight, with respect to the apparent motions of the planets: explains the just dimensions, relative distances, due order, and exact proportions of the spherical bodies, which compose the solar system. Nor is it even confined to these great objects of nature, since it opens the stupendous prospect of other suns, and other systems of planets, scattered over the boundless regions of space, and moving in obedience to their respective laws. It marks out their particular places, assigns their various names, and classes all the systems of worlds in their respective constellations. The calculations of astronomy prove the certainty of the future phenomena of the heavenly bodies; the various phases of the moon; the places of the planets; the point of time when the sun and moon will be immersed in the partial, or the total darkness of an eclipse. These sublime truths are established upon such evidence, and the calculations upon which they proceed are marked with such accuracy, as incontestably to prove the solid basis upon which this most wonderful of the sciences is founded.

Navigation, which depends entirely for the certainty of its principles upon astronomy and geometry, is so noble an art, to which mankind owe so many advan-

tages, that on this account these sciences ought to be particularly studied, and merit the greatest encouragement, especially in a nation indebted to it for its riches security, and glory. And not only does the ordinary art of navigation in the direction of the course of vessels depend upon mathematics, but whatever improvements are made in ship building.

Mathematical studies have been held in honour, and cultivated with diligence, wherever polite learning has flourished. The remaining works of Archimedes attest the profundity of his genius; and the wonderful and destructive effects related of his burning glasses, when Syracuse was besieged by the Romans, are confirmed by modern experiments. By the Grecian philosophers in general these studies were regarded as forming an essential part of a liberal education. They were taught to the eminent scholars of Pythagoras. Plato allayed the warmth of a poetical fancy by these pursuits, and denied admittance into his school to those who were not conversant with geometry. He earnestly recommended arithmetic, geometry, and astronomy as excellent preparatives to all other studies, and as more immediately useful to those who were intended for the public offices of the state. Aristotle illustrated the rules of his logic and the precepts of his ethics by arithmetical and geometrical proportions. At the time when the elegant arts were gaining ground in Rome, Cæsar found his most agreeable relaxation from the tumults of war, and the business of a camp, in reforming the callendar, and tracing amid the stillness of the night the courses of the planets, as they revolved in the clear hemispheres of Egypt and Gaul. The decline of science marked the continuance of the dark ages; during

which theology consisted in absurd dogmas and gross superstition, and confused and unintelligible systems dishonoured the name of philosophy*.

CHAPTER III.

THE SUBJECT CONTINUED.

THE detail of those who, in modern times, have followed mathematical studies with ardour, and united useful discoveries to scientific researches, constitutes the history of some of the greatest efforts of the human mind.

Nicholas Copernicus was born at Thorn, a city of Prussia, in 1473. Dissatisfied with the reigning system of Ptolemy, who placed the earth in the centre of the universe, he revived the very ancient opinion which had been taught by Pythagoras nineteen centuries before in the schools of Magna Græcia. He derived his information respecting the astronomical doctrines of the great philosopher of Samos from the academical questions of Cicero, and the works of Plutarch, as he acknowledged in the dedication of his works to Pope Paul the third. Copernicus maintained that the sun was placed in the centre of the universe, and that Mercury, Venus, the Earth, Mars, Jupiter, and Saturn

* The preceding account of mathematics is very concise and defective. The reader must examine the best mathematical books in the list at the end of this volume.

revolving each upon its axis, move round the sun from west to east. The different revolutions of these six planets are proportioned to their respective distances from the sun, and the circles which they describe cut the ecliptic in different points.* The earth completes its revolution in the space of a year, in a circle which includes the orbit of Venus, and is included by the orbit of Mars. It has another revolution upon its axis in twenty-four hours, and by this movement the distinctions of day and night are produced. The moon, an inferior planet, attendant on the earth, moves round it in an elliptic orbit, and revolves upon her own axis exactly in the time she goes round the earth. The heavens which form the spacious fields of ether are immoveable, and the stars are fixed in them at an immense distance from the sun†.—Such is the *Copernican system*, the glory of modern philosophy, and the basis of the subsequent observations of astronomers.

Kepler, born at Weil, in Saxony, in 1571, was the friend of Tycho Brahe, and the associate of his astronomical studies. He has rendered his name illustrious in the annals of science by developing the laws which regulate the motions of the planets. Assisted by the observations of the Danish philosopher, he made the following discoveries. I. That the six primary planets move round the sun not in circles, but in ellipses, having the sun in one of the foci. II. That the planets describe round the sun equal areas in equal times. III. That the squares of the periodical times, in which the planets revolve round the sun, are as the cubes of their mean distances from him. This discovery is

* The planets revolve round the sun in elliptical orbits or paths.

† This is erroneous

found to be of great use in astronomical calculations, for if the periodical times of two planets be given, and the distance of one of them from the centre; the other may be found by the rule of proportion.

The name of *Bacon* occurs a second time in the English history connected with the progress and contributing to the honour of science. *Sir Francis Bacon*, Baron Verulam, early distinguished in the court of Elizabeth by his wit, and afterwards disgraced in that of James the First, by the corruption which he either practised, or allowed, was the great projector of a plan for conducting the researches of philosophy upon the most comprehensive principles. He proposed to substitute experiment for theory, and laid the foundation of the solid and stupendous pyramid of human knowledge, which rises from earth to heaven in due proportion and regular order. Its foundation is the history of the works of nature, its second stage her true principles and various powers; and its summit obscured by clouds, scarcely penetrable by mortal eye, approaches even to the great Creator himself.

To understand the full meaning of this figurative allusion, it may be necessary to give some general view of his principal works, viz. his *Advancement of Learning*—*de Augmentis Scientiarum*—and *Novum Organum*.

In his "Advancement of Learning," he has laid down the principles of genuine philosophy, not founded upon hypothesis and conjecture, but truth and experience. His plan required him to take an accurate review of the state of learning. That he might not be bewildered in a subject so complex and extensive, he has arranged the numerous arts according to the three great faculties of the mind—memory, imagination,

and judgment, under three classes—history, poetry, and philosophy. These may be considered as the principal trunks, from which shoot forth all the smaller branches of science. Whatever he found to be imperfect or erroneous, he has pointed out, together with the best means of improvement. At the end of this treatise, he has traced, in one general chart, the several provinces of science that were neglected, or unknown.

The design of the "Novum Organum," which forms the second and most considerable part of the Advancement of Learning, was to raise and enlarge the powers of the mind by a useful application of reason to all the objects which philosophy considers. Thus does Lord Bacon present to the world a new and superior kind of logic, not intended to supply arguments for controversy, but truths for the use of mankind. It is an art inventive of arts, and productive of real, important, and new acquisitions of knowledge. It commonly rejects the use of syllogism, and substitutes a severe and genuine induction—an induction which examines scrupulously the subject in question, views it in all possible lights, excludes whatever does not necessarily belong to it, and then draws conclusions as to its real principles and properties. See p. 68, vol. ii. Many proofs may be brought to show how well this mode of inquiry has since succeeded, and how fruitful it has been in new discoveries. The great Newton applied it to the elucidation of the science of optics, and by a variety of experiments has analized the nature and properties of light, the most subtile of all known bodies, with accuracy and precision hardly to have been expected from an examination of subjects the most gross and palpable. The method of induction

has likewise been applied with great success to chemistry, botany, mineralogy, and other branches of science.

In order to preclude objections drawn from the supposed visionary nature, or novelty of his system, Lord Bacon treats in the third part of his instauration, on the "Phœnomena Universi"—this is intended to form a collection of materials towards a natural and experimental history. Such a work he thought indispensable, as without it the united endeavours of all mankind, in all ages, would be insufficient to rear, to complete the great structure of the sciences. His "Sylva Sylvarum" is a storehouse of materials, not arranged for ornament, but thrown together for the service of the philosopher, who may select such as suit his purpose, and with them, by the aid of his Novum Organum, build up some part of a self-evident philosophy, which is the crown, and completion of his system. If several eminent men following his steps in the road which he prepared for them, have advanced farther into the provinces of nature and science, and surveyed them with more attention, yet to him is due much of the honour of their discoveries. The fertile genius of Columbus imagined a new world, and he had the boldness to go in search of it, through an unexplored and immense ocean. He succeeded in his attempt, and conducted his followers to a spacious, rich and fruitful continent. If succeeding adventurers have penetrated farther into the same regions, and distinguished them with more accuracy, the progress of their discoveries ought to redound as much to his honour, as to their own.

Britain, France, Italy, Germany, and even Russia, have adopted Bacon as their guide in scientific re-

searches, and submitted to be directed by his institutions. The empire which he has founded in the philosophical world, is as universal as the free use of reason; and the one will continue, until the other is no more.*

Our sketch of the scientific powers of these eminent men is more rapidly traced, that we may hasten to one, whose name diffuses a glory round his native country, and is celebrated throughout all those parts of the civilized world, where the sciences have made any progress.

Isaac Newton was born at Woolstrope, in Lincolnshire, in 1642, and studied at Trinity College, Cambridge. His progress in mathematics was rapid and astonishing. It was the rare quality of his mind to make science his own by intuition, for he is said to have comprehended the full force of Euclid's Theorems and Problems at the first perusal. Such was the early maturity of his intellect, that he had laid the foundation of his principal discoveries by the time he arrived at the age of twenty-four. He invented a new method of calculation, which greatly facilitates computations in the higher parts of mathematics. This most important science is called Fluxions. He contributed to the enlargement of geometry, by his Treatise on the Quadrature of Curves; and made still farther advancement towards the perfection of that branch of science in his incomparable *Principia*. Disdaining to impose upon mankind by unmeaning

* See the Tatler, No. 267, for one of the best characters of him ever written. My statement is taken from the very excellent life of Lord Bacon, prefixed to his works in folio, written by Mr. Mallet. See a good Analysis of Bacon's Novum Organum in Adams's Lectures, Lect. i.

names, he allowed no place to hypothesis in his experimental philosophy, but confined himself for the illustration of his principles to induction alone. Wherever he directed his attention, the darkness of ignorance was dispelled, and the beams of demonstration enlightened his steps. To the certainty and precision of innumerable experiments, he united the strictness of close reasoning. He demonstrated that *gravity*, or some principle which causes heavy bodies to fall to the ground, or in more philosophical language, which makes matter tend to the centre, familiar by its effects to the observation of mankind, extended its influence throughout universal nature. It is essential to all bodies, retains the planets in their orbits, and reaches from the common centre of the sun to the most distant planet of our system, and probably through all space. He computed the distances, the magnitudes, the velocities, and the orbits, of the planets, weighed the revolving spheres, and measured the magnitude of the sun and the moon. He assigned the causes for the irregular course of the moon, and proved her influence combined with that of the sun over the vast ocean. Hence he was enabled to give to the world a new and consistent theory of the tides.

"The most popular and most celebrated of all his works is his *Philosophiæ Naturalis Principia Mathematica*, first published in the year 1687. The general subject is, the doctrine of motion, the most considerable of all others, for establishing the first principles of philosophy by geometrical demonstration. By experiments made with the most accurate exactness, and observed with the nicest circumspection and sagacity, he first discovers what are the real phenomena

of motion, arising from the natural powers of gravity, elasticity, and the resistance of fluids. Whence he rises by the assistance of his own sublime geometry, to investigate the true forces of these powers in nature, and then from those forces demonstrates the other phenomena, particularly in settling the system of the heavens; he shows in the first book what are the genuine effects of central forces, in all hypotheses whatsoever that can be framed concerning the laws of attraction; then from Kepler's rules and other astronomical and geographical observations, he shows what the particular laws of attraction are in nature, and proves that this attraction is every where the same as the terrestrial gravity, by the force of which all bodies tend to the sun, and to the several planets. Then from other demonstrations, which are also mathematical, he deduces the motion of the planets, the comets, the moon, and the sea." Biog. Brit. Article Newton.

Improving upon the discoveries of Kepler, Newton demonstrated that the planets were attracted towards the sun, as a common center; that the force of this attraction was reciprocally as the squares of their distances from this center; that they revolved in ellipses, having the sun in one of the foci, and that when bodies did so resolve in ellipses, the squares of their periodic times must necessarily vary as the cubes of their mean distances. See Vince's Astronomy, vol i, p. 100.

Persevering with undiminished ardour in his philosophical labours, he determined the true figure of the earth; and the travels of the French academicians to measure the unequal length of a degree at the equator and the poles, served only to verify, by actual obser-

vation, the problem which he had solved in his closet. His speculations were not confined to our planetary system; for he extended them to all the stars that shine in the vast expanse of heaven. Every one, from analogy, was determined to be the centre of an harmonious system, subject to the same general laws as that of the sun.

In other branches of philosophy, he was greatly indebted to the previous investigations of others for a foundation, whereon to build his improvements; with respect however to his researches into the nature and properties of *light*, he was the author of a new and beautiful theory. He calculated its velocity, as it flows in perpetual and rapid streams from the sun. He instructs us, that it is diffused through our planetary system, while its heat is diminished in proportion to the square of the distance from its source. He scrutinized its various properties, as well as the laws of its motion. By the aid of a triangular prism of well polished glass, he analysed its rays, and saw the rich and brilliant display of the seven primogenial colours of which light is composed. These colours appeared not strongly contrasted with each other, but melted by gentle gradations into the neighbouring tints.

"He from the whitening undistinguished blaze,
Collecting every ray into his kind,
To the charmed eye educed the gorgeous train
Of parent colours. First the flaming *red*
Sprung vivid forth; the tawny *orange* next;
And next delicious *yellow*; by whose side
Fell the kind beams of all refreshing *green*,
Then the p[illegible]hat swells autumnal skies;

Ethereal play'd; and then of sadder hue
Emerged the deepened *indigo*, as when
The heavy skirted evening droops with frost.
While the last gleaming of refracted light
Died in the fainting *violet* away.

Thomson's Poem to the Memory of Sir I. Newton.

His active mind sought relaxation in researches into remote times: he applied astronomy to rectify the computations of chronology, and succeeded in referring the most remarkable transactions, that were obscured by remote antiquity, to the most probable periods of time. See the History of the Jews, vol. i. By the unwearied exercise of close and patient meditation upon deep mathematical learning, and a series of correct and accurate experiments, he carried his discoveries into the recesses of nature, and developed the sublime and simple laws of matter and of motion. That his insight into the constitution of the universe did not extend to any greater length, seems not so much to be attributed to the narrowness of his own capacity, as to the imperfection of human nature itself. He discovered the plain vestiges of the Creator in his works; and, filled with the most sublime conceptions of his power, wisdom, and goodness, he ever bowed with reverential awe at the mention of his adorable name. Genius, science, industry, and diffidence, combined to form this great philosopher; and his various exertions, as successful as they were transcendent, displayed at once the depth, the extent, and the energy of his intellectual powers. Commencing his researches with plain and easy principles, and terminating them with the most sublime discoveries, the progress of his mind was like the mystic ladder in the vision of the patriarch, which reached from earth even to the footstool of God. It reflects no in-

considerable credit upon the understandings of men to comprehend the extent of his discoveries; and it is no small happiness to every person of a scientific turn of mind, to live subsequent to the age which he irradiated by his genius. And how preeminent is the glory of Britain to enroll in the list of her enlightened sons, the man who may be denominated the great interpreter of the laws of nature, and the brightest luminary of science!

Newton, with the diffidence of one, who was truly sensible of the limited powers of the human mind, advanced with slow and steady pace along the road of experiment, and ascended from certain effects, ascertained upon earth, to obscure causes, which were concealed in heaven. With an ardent and penetrating eye he looked abroad upon nature, discovered her genuine character, and, always acting under the control of a cautious and solid judgment, established no principles, which were not perfectly consistent with her real constitution. He thought it not beneath the dignity of his philosophical character to remark the slightest effects, aimed at certainty in particular pursuits; and had the merit, the glory, and the happiness, to be in every pursuit successful.

So justly does the genius of Newton claim a conspicuous place in every discussion of mathematical subjects. Still however we are not so far dazzled by the lustre even of his name, or astonished by the extent and the variety of his discoveries, as to think that the works of nature are solely to be viewed through the medium of theorems and calculations. The works of the great Creator are not confined to abstract considerations of numbers and measures, as the sole criteria of their excellence. The sublime productions

of Almighty power, the sun shining in meridian glory, the moon pouring her mild light upon the earth, the ocean rolling its vast floods, and the beautiful colours which diversify all objects, charm the heart, and please the fancy, by their external appearance, at least as much as an inquiry into their laws, nature, and constitution can satisfy the understanding.

CHAPTER IV.

THE WORKS OF NATURE.

IT is the glorious privilege of man, while other animals are confined within the limits which instinct has prescribed, to carry his observations beyond his own immediate wants, and to contemplate the universe at large. He extends his inquiries to all the objects which surround him, and exercises his judgment, and informs his understanding, by ascertaining their nature properties, and uses. In the various branches of the mathematics, in the abstract speculations of metaphysics, or in searching the records of history, he is solely intent upon the operations of his own mind, or the actions of himself and his fellow creatures: but in the study of nature, he examines every object presented to his senses, and takes a general survey of the wide and interesting prospects of the creation. The earth he treads, the ocean he crosses, the air he breathes, the starry heavens on which he gazes, the mines and caverns he explores, all present to him abundant materials for his researches. And when thus employed, he is engaged in a manner peculiarly

suitable to his faculties, since he alone is capable of knowledge, he alone is distinguished by the power of admiration, and exalted by the faculty of reason. The terraqueous globe presents a most glorious and most sublime prospect, equally worthy of the capacity of man to contemplate, and beautiful to his eye to behold. And the treasures of nature, which this prospect comprehends, are so rich and inexhaustible, that they may furnish employment for his greatest diligence, stimulated by the most ardent curiosity, and assisted by the most favourable opportunities. At the same time that she solicits him to follow her not only into her open walks, but likewise to explore her secret recesses, she fails not to reward him with the purest gratifications of the mind, because at every step he takes, new instances of beauty, variety, and perfection are unfolded to his view.

The study of the works of nature is in itself capable of affording the most refined pleasure, and the most edifying instruction. All the objects with which we are surrounded, the smallest as well as the greatest, teach us some useful lesson. All of them speak a language directed to man, and to man alone. Their particular structure and formation convey to us a most pleasing and interesting truth. Their evident tendency to some determined end marks the design of a great Creator; and their mutual relations, both to us and to each other, are so manifest, as to point out the various links in the vast chain of creation. They have both a physical and a moral use: they enrich our lives with conveniencies, instruct our understandings with important truths, and warm our hearts with the most ardent gratitude to the supreme Being. The volume of creation is replete with wisdom; it contains the

objects of arts, science, and philosophy, and is open to the inspection of all the inhabitants of the globe. Nature speaks by her works an universal language, the rudiments of which are peculiarly adapted to the inclination and capacity of the young, whose curiosity may be gratified and excited by turns: but more profound and extensive inquiries are suitable to the contemplation of persons of every age; and no subject can be more worthy of their attentive observation.

The different theories of the earth, the generation of animals, the first population of the world, the perceptive power of vegetables, and the internal structure of the globe, are subjects respectively supported by arguments, which may rather invite assent by their plausibility, than produce conviction by their evidence; and may perplex our minds without satisfying our judgment: but no one can survey the common phenomena of nature, the wonders of the heavenly bodies, and the productions of the earth and the ocean, without arriving at some accurate conclusions as to their origin and design, and without increasing pleasure at every new discovery.

It is the object of the naturalist to examine all the visible works of the creation; he is therefore employed in the most extensive province of human knowledge, as nature appears to have fixed no bounds to her productions. Still however, if no limits can be set to a subject so copious, it may at least be reduced into order. Philosophers have accordingly divided all the productions of the globe into three classes, which are denominated kingdoms; and comprehend, I. ANIMALS; II. VEGETABLES; and, III. MINERALS.

THE COMPARATIVE NATURE OF MAN.

I. That which is first to nature in the order of creation, is not first to man in the order of philosophical inquiries; or, in other words, the progress of the Creator is different from that of the creature. When the Supreme Being by his omnipotent word called the universe into existence, he began, as we are informed upon the authority of scripture, with the most simple elements, and proceeded from inanimate and unorganized matter, first to the creation of the vegetable tribes, then to the inferior animals, and finally to the human race. Genesis i, and ii. Man begins his speculations with himself, and, from contemplating the structure of his own body, and the faculties of his mind, proceeds to survey the rest of the creation. He considers the properties of animals, the vegetable tribes which cover the earth, and the masses of unorganized matter, which are found beneath its surface: and this view raises his mind from the contemplation of effects so numerous, so diversified, and so wonderful, to the discovery of their primary cause.

Man, the image of the Deity, the first and noblest of all his works, is distinguished from other animals, no less by his external form, than his internal faculties. The most accurate knowledge of him is derived from comparison; for if the brute creation had no existence, his nature would be little understood, and very inadequately comprehended. Such is the advantage to be derived from comparative anatomy, and the contrast between the intellectual properties of man, and the instinctive power of beasts. The external figure of the human species indicates him to be the lord of the

creation. His body is upright, and his countenance is stamped with the characters of dignity and sovereignty. He alone sheds the tears which spring from emotions of sensibility unknown to animals; and he alone expresses the gladness of his soul by laughter. His erect posture and majestic deportment announce the superiority of his rank. He touches the earth only with the extremity of his body; his arms and hands, formed for nobler ends than the correspondent organs of quadrupeds, execute the purposes of his mind, and bring every thing within his reach, which can minister to his wants and his pleasures. By his eyes, which reflect the intelligence of thought, and the ardour of sentiment, and which are peculiarly the organs of the soul, are expressed the soft and tender, as well as the violent and tumultuous passions. They are turned, not towards the heavens, but to the horizon, so that he may behold at once the sky which illuminates, and the earth which supports him. Their reach extends to the nearest and the most distant objects, and glances from the grains of sand at his feet, to the star which shines over his head at an immeasurable distance.*

Thus is man superior in the material and external part of his composition. Though naturalists place him in one of the classes of animals, it is not their intention to derogate from his dignity. The general denomination they give to the class, to which they assign

* For observations on the nature of man, see Buffon, vol. ii, p. 352; Varieties of the human species, Buffon, vol. iii, p. 57. Gregory's Comp. View. For man, as the head of the classes of animals, see Linnæi Systema, vol. i, p. 36, &c. His external and internal constitution, Butler's Analogy, preface, p. 16.

him, is not intended to infer a relation more intimate than the idea, whence it is derived; since even those who wish to degrade him to a level with the inferior animals, cannot but acknowledge that nature may often admit a resemblance in some particulars, coexistent with the greatest dissimilarity in others.

Man is a thinking and a rational being. His body is divisible, extended, and penetrable, and subject to disease, decay, and death; his soul is indivisible, unextended, and immaterial. He has the brilliant and inventive faculty of imagination, to form the most various ideas; he has an active memory, not merely resulting from a renewal of sensations, but retaining with exactness the impressions of preconceived ideas; and he possesses a judgment to discriminate, compare, and combine his thoughts, and to deduce conclusions from them by repeated operations of the mind. By the superiority of his courage and ingenuity he subdues animals far more bulky, more alert and stronger than himself, and makes them subservient to his purposes. Among inferior animals there is no mark of the subordination of the different species: they are never subject to each other, but all are subject to man. He possesses the exclusive faculty of speech, as well in a savage as in a civilized state. The organs of other animals, the tongue, and the palate, are nearly as perfect as his; but they cannot speak, because they are destitute of the power of thought. The cries, which they utter, more nearly resemble the sounds of a musical instrument, or the repetition of an echo, than the articulate tones of the human voice. In man there is not an instinct common to the whole species, but a mind belonging to every individual, which not only prompts him to action, and to the supply of his natural

wants, but instigates him to all the various exertions of invention, and the diversified operations of genius.

In the direction and use of these faculties, which are common to him with the inferior animals, may be discerned the superiority of his nature. "The Creator has given us *eyes*, by the assistance of which we discern the works of creation. He has moreover endowed us with the power of *tasting*, by which we perceive the parts entering into the composition of bodies; of *smelling*, that we may catch their subtile exhalations; of *hearing*, that we may receive the sound of bodies around us; and of *touching*, that we may examine their surfaces; and all for the purpose of our comprehending, in some measure, the wisdom of his works. The same instruments of sensation are bestowed on many other animals, who see, hear, smell, taste, and feel; but they want the faculty, which is granted us, of combining these sensations, and from thence drawing universal conclusions. When we subject the human body to the knife of the anatomist, in order to find in the structure of its internal organs something, which we do not observe in other animals, to account for this operation, we are obliged to own the vanity of our researches; we must therefore necessarily ascribe this prerogative to something altogether *immaterial*, which the Creator has given to man alone, and which we call SOUL." Linnæus's Reflections on the Study of Nature, p. 12. It is by the exertion of this sublime principle, in all the various modes of thought, reflection, and judgment, that he is enabled to estimate the powers of all other creatures; but they are totally incapable of ascertaining his; that he is empowered to pursue every great and noble object, to enlarge his knowledge in every direction, and make the important

discoveries of science, art, and philosophy. It is his soul, which is the seat of conscience, and makes him feel that he is accountable for his actions. It is this, which elevates him above sensible things, qualifies him for the reception of a divine revelation, and inspires him with the desire of happiness and immortality*.

Another property, which essentially distinguishes man from the other animals, is, that he is a *religious* being. They partake not with him in any degree, or in any respect, this sublime faculty, which is the glory of human intelligence. By his piety man is exalted above the beasts, is enabled to form a conception of the general plan of nature, and confirms the idea of order, harmony, and regularity, which he derives from surveying the works of creation, by the glimpse which he catches of the Creator.

All nations are impressed with an opinion of the existence and the providence of a Deity; not that they all obtain a knowledge of him, after the manner of a Socrates or a Newton, by contemplating the laws he has given to the universe, or the general harmony of his works, but by dwelling on those beneficial effects of his power, which interest them the most. The Indian of Peru worships the sun; the native of Bengal adores the Ganges, which fertilizes his plains; and the wandering Iroquois implores the spirits, who preside over his lakes and forests, to grant him success in fishing, and favourable seasons for the chase. The Natches, a ferocious tribe, bordering on the Mississippi, erect temples, and offer the sculls of their enemies to the god of war; whilst other American savages in a

* For many interesting reflections upon the human figure and faculties, as contrasted with those of other animals, see Buffon and St. Pierre.

purer spirit of devotion confess a supreme being wise and benevolent, and his subordinate agents to whose care is intrusted the government of the world. The sentiment of piety is therefore a feature as discriminating of man as the principle of reason. It is an image, which, however mutilated by the course of time, debased by superstition, or veiled by mystery, marks him wherever he is found; and is discoverable as much in the most remote and unconnected islands in the recesses of the ocean, as upon extensive continents, where the communication of opinions and the intercourse of travellers are most easy.

In the course of our observations upon the various animals of the globe, we cannot fail to remark the uniform care, which they take of themselves and their offspring. The general laws, by which they are governed, have a constant reference to their preservation and increase. They exert the most watchful circumspection as to the places they frequent, and the enemies they avoid; and they display the greatest ingenuity in the formation of their dwellings. In such instances it cannot escape our observation that there is an evident tendency to a determined end, and that the means with which nature supplies them is nicely proportioned to that end. The principle which guides them is *instinct*, and not *reason*. They are impelled by necessity, rather than led by choice, and are passive to the impressions made upon them by external objects. Hence their works and actions are always uniform and invariable. The salmon, after having explored the wide ocean, always returns in defiance of all the obstacles which oppose her progress, to the same river, to deposit her spawn. The bee always frames her cell in the form of an hexagon, which is the most capa-

cious of all the figures that can be joined together without any interstices. And the lark builds her nest in the same places, and of the same materials, and at the same season of the year. If they were influenced by reason, they would not be disconcerted and unmanageable, when taken from that mode of subsistence, which is peculiar to each species. If they were capable of reflection or invention, they would not be limited to one invariable plan of operations; reason would show itself by new efforts, and the variety of their ideas would not fail to diversify their industry. If animals possessed a spark of that divine flame, which enlightens the human race, we should find them frequently deviating from their system of action. It is solely in the breast of man, that the power of producing diversified effects is fixed; and consequently it is to him alone, that we must look for the power of choice, originality of design, and various inventions. But his superiority does not terminate here. Reason is the substitute for those qualities, which animals possess in a degree superior to man. He has not indeed the wings of an eagle, to convey him with rapidity to the most distant places; he does not possess the horns of the stag to attack, nor the fangs of the lion to seize his prey; he is not, like them, originally clothed by the hands of nature; at his birth he is not furnished with the feathers of the bird, or the fur of the beast: but, instead of these conveniencies, he is endued with the exalted faculty of reason, which teaches him the most important lessons. He feels the strong and animating conviction, that he is the lord of the creation, and that the beasts of the field, the fowls of the air, and the fishes of the sea, are designed to supply his wants, and minister to his comforts.

§. 1. *The laws and constitution of nature with respect to animals in general.*

That every production is suited to its respective place, appears from the situation of young animals, and the particular season of their birth. As soon as the lamb is strong enough to subsist without the milk of its mother, it is supplied by the most wholesome nutriment, which it finds in the tender grass of the spring. Ray, p. 123, 128. Derham's Physico-Theology, p. 184. Fish and other animals, which do not themselves feed their young, deposit their spawn or eggs in such places as are most convenient for bringing them to maturity, and where their progency can find nutricious food in the greatest abundance. The pike leaves her spawn either in ditches, or near the banks of rivers, where thick weeds shelter them from injury, and small aquatic animals afford provision for her young, and were the genial warmth of the sun favours their growth. The white butterfly fastens its eggs to the leaves of the cabbage, which furnish nutriment to the caterpillars, which are its offspring. The system of adaptation extends no less to their frame, than to the places of their abode. Their organs of motion and mode of subsistence are exactly suited to their wants and situations. The fins of the fish, the antennæ of insects, which guard their eyes, and forewarn them of danger, are as admirable in their construction and use, as the tail of the beaver, and the proboscis of the elephant. Their legs are admirably fitted to their wants and enjoyments. In some they are formed for strength only, and to support a vast and unwieldy frame, without proportion or symmetry: thus the legs of the elephant, the rhinoceros, and the hippopotamus resemble massy pillars. Deer, hares, and other creatures, which find their

safety in flight, have their legs entirely adapted to that purpose, and they are therefore slender, flexible, and full of nerves.

Their covering is likewise exactly suited to their places of abode. The fox and the wolf, which in temperate climates are covered with short hair, are protected in the rigour of the winter in the polar regions by furs of considerable length and of fine texture. The beaver of Canada, and the ermine of Armenia, the natives of cold climates, are remarkable for the warmth and delicacy of their furs: the elephant and the rhinoceros, the natives of the sultry line, have scarcely any hair at all.

Animals, which exercise the faculty of sight in the dark, have the tunica choroides, or coat behind the retina of the eye, which in the human organ of vision is black, of a white or grey colour. The eyes of the cat species become in the dark as it were all pupil, and by this enlargement, they are enabled to see better by night than by day. It is for this reason the traveller can keep off the lion, the tyger, and all the varieties of the same tribe by fires blazing in the night. In the day, they seldom prowl in search of food, as the light is too strong for their eyes. Some animals excel in swiftness, some in force. The strength of the lion, would be highly inconsistent with the timidity of the stag; and the horns of the latter would be unserviceable to the former, who rushes with impetuous fury on his prey, through the thick and entangling forests. That the particular parts of their frames are conducive in the greatest degree to vigour and growth, and that every place affords proper sustenance to its peculiar animals, is clear from the plumpness of their bodies, the agility of their actions, and the beauty of their

forms, whenever they are found in a natural and wild state. The insect, visible by the assistance of a microscope, sporting in a drop of water, appears no less active and strong, in proportion to his size, than the whale which agitates the northern ocean; and among quadrupeds, the sleek mole, the active mouse, the shaggy bear, and enormous elephant, discover an equal degree of health and robustness.

He who has given life to animals has diversified their means of supporting it: and we cannot fail to remark an evident reason for this constitution of nature; for if all birds were to fly in the same manner, every fish to swim with the same velocity, and every quadruped to run with equal swiftness, the tribes of the weaker animals would fall a prey to the unavoidable rapacity of the stronger, and would soon be entirely extinct.

Objects that are open to daily observation lose their effect upon our minds; but such as are rare and uncommon seldom fail to strike us with admiration. This remark is peculiarly applicable to those animals, which form as it were the connecting links in the chain of animation, and which show with what facility the great author of nature can depart from those general laws, by which he limits certain animals to peculiar elements. The sight of web-footed birds, serpents, frogs, lizards, and tortoises, which can equally betake themselves to the land or the water, excites no surprise; but how curious does the silurus callychthys, a species of fish, appear! When the rivulet it inhabits is dry, it has the power of travelling over land, till it finds more copious streams. The inguana, a species of lizard, sports in the water, or lives among trees, feeding upon the flowers of the mahot and the leaves of the mapon, in the warm climate of Africa. The

flying squirrel can extend the membranes which grow on each side of its body in such a manner, that, being able to descend by a precipitate slight from one branch to another, it easily avoids its pursuers. The flying fish, supported by his extended fins, seeks safety in the air, to escape the rapacity of its enemies in the water. The beaver of New Holland has the bill and the web feet of a duck. The ostrich is of an ambiguous class, and may be said to be rather a running, than a flying animal: his wings are not large or long enough to raise him from the ground, but rather serve as sails or oars to impel the air, and add swiftness to his feet. The scaly sides of the crocodile, the hard integument of the rhinoceros, and the hairy coat of the cassowary prove with what ease their Creator could vary his plans, and furnish each with a kind of covering, differing from that which belongs to their species.

Every region of the globe, with very few exceptions, is found to be replete with life. To produce organized and animated bodies is the constant employment of nature, and her prolific power knows no bounds. Ray, the ingenious author of a curious work on the creation, has divided animated bodies into four genera; *beasts*, *birds*, *fishes*, and *insects*. "The species of beasts, including serpents, are about 150; the number of birds known and described, near 500; and the number of fishes, excluding shell fish, as many: but if the shell fish be taken in, more than six times the number. The insects, if we take in the exanguious, both terrestrial and aquatic, may vie even with plants themselves. Butterflies and beetles are such numerous tribes, that I believe in our own native country alone the species of each kind may amount to 150, or more. The insects

in the whole earth (land and water) will amount to ten thousand."—Ray, p. 23.

Linnæus "has distributed animals into six classes, viz. *mammalia*, *aves*, *amphibia*, *pisces*, *insecta*, *vermes*. Each class is divided into a certain number of orders, and each order is again subdivided into genera, each of which contains a variety of species. This system includes 354 kinds, and near six thousand known species."

Such a variety of animals found in the world is a just subject of astonishment. Many are visible to the naked eye; but the magnifying power of glasses has opened new scenes of life to our views. The green leaves, the blades of grass, the pools of stagnant water, are as fully peopled with inhabitants, in proportion to their size, as the broad rivers, deep forests, and wide spread oceans, which diversify the globe. The moss and grass, to the insects inhabiting them, are gardens and forests, consisting of numberless plants; drops of water are seas; and the grains of dust and sand are precipices and mountains. The minuteness of many insects is the strongest reason for admiring the curious mechanism of their structure, which combines so many vessels, organs, joints, weapons, and membranes in a single point or speck, frequently so small indeed, that their whole frame to the unaided eye is scarcely visible. We cannot fail to admire the benevolence of nature to man in this particular circumstance of their minuteness; for if they had bulk and size, in proportion to some of the larger animals, they would be the most hideous and formidable of his enemies. The common insects, which now only appear to discolour the ears of corn, would then frus-

trate the labours of agriculture, and make the most destructive ravages in our fields and harvests.

In places most remote from the abode of man, and in every element, are animals to be found. The waters contain innumerable inhabitants. Such kinds of fish as are wholesome for food are exceedingly prolific, but those which are of a noxious kind are much less so. The same benign Providence which has regulated this power of increase keeps those at a distance from our shores, which we have no want of; and sends those which furnish delicious food within the reach of our arts. A cod will bring forth as many eggs in a year, as amounts to the whole population of Britain: one million have been found in a flounder, and half that number in a mackarel. Sullivan's View of Nature, vol. iii, p. 261. Among the rocky coasts are discovered tribes of shell-fish; in the wide and open ocean the shark and the grampus seek their prey: and in the northern seas, amid the masses of ice, which abound in the polar circle, the mighty whale secures his wintry retreat. In the deep forests of the Cape of Good Hope walks the elephant, and among the sedges of the Nile and the Ganges lurks the insidious crocodile. The rose-coloured flamingo inhabits the miry shores of the southern ocean; between the tropics the gay humming bird, the smallest of the feathered race, extracts the honey from fragrant flowers; among the sands of Africa the ostrich deposits her eggs, leaving her young to the fostering care of nature; and upon the summit of the craggy rocks of the Orknies, inaccessible to man, the eagles frame their capacious eyry.

Travellers of credit assure us, that there is not a shallow in the seas between the tropics, which is not distinguished by some species of bird, crab, turtle, or fish, no where else to be found so varied, or in such abundance.

Heat, if not the principle of animation, is at least its great and necessary stimulative. As soon as the sun reaches the point of the vernal equinox, his piercing rays begin to inspire universal nature with activity. Every step he advances through the heavens announces the progress of vegetation, and general production. All animals come forth from their wintry retirement, and follow with activity the dictates of their peculiar instincts. Incited by the genial influence of warmth, the feathered tribes fill the groves with their songs, the quadrupeds and reptiles disport in the verdant fields and forests, and the finny race leave the dark recesses of the northern deeps, to hasten in countless shoals to the coasts. Animals then obey with alacrity the universal law, which prompts them to propagate their kind, and to enjoy the happiness peculiar to their respective species.

Throughout universal nature a gradation of beings may be traced: and yet their particular differences elude the observation, like the various colours of the rainbow blending and mixing with each other. Where vegetation ceases, or seems to cease, perception begins; and we trace some of the first rudiments, or sparks of it, in the actinia, or sea anemone, the oyster, and the snail. Then it ascends through various gradations of beings, distinguished by more enlarged and more active faculties, more perfect and more numerous organs, to those creatures, which approach to the nature of man. We behold the distant resem-

blance of his sagacity in the elephant, of his social attachments in the bee and the beaver, and the rude traces of his form in the orang outang. We next remark discriminations between the different families of mankind, from the stupid and brutish savages of Nova Zembla to the polished Europeans, characterized indeed with the same general form and limbs, but marked by dissimilarity of features. In various climes the difference of complexion and stature is likewise observable: such as the fair countenances of the natives of the North of Europe, the swarthy Moor and Spaniard, and the olive coloured and black Asiatic; the dwarfish Tatars of the Polar regions, and the giants of the Straits of Magellan. Nothing however is more worthy of our attention, as it constitutes a distinction, which is not merely external, but of an intrinsic and most exalted kind, than man improved in his intellectual powers, adorned by arts, and refined by philosophy, as we contemplate his character in a Bacon, a Boyle, and a Newton. Then we ascend to heaven itself, and contemplate the angels differing in rank and subordination, rising gradually to the archangel, who stands before the throne of God, and executes his commands. And, finally, our soaring thoughts reach the summit of the long-ascending series of beings, which is extended even to the Creator himself.

The figures and the proportions of animals, the number and the position of their limbs, the substance of their flesh, bones, and integuments, and more particularly the structure of the human frame, are replete with discoveries of the most admirable contrivance, as to their arrangement and fitness for their different uses.

That the organs of animals are essential to their preservation, and even to their existence, will appear from considering the construction and properties of the *eye*, which is one of the most remarkable and the most useful. Supposing an animal endued with life and motion, yet still it could not know in what place to find sustenance, or by what means to avoid danger, without the faculty of sight. This constitutes in man, as well as in other animals, a refined kind of feeling, extended to the various objects of nature and art. The organ of vision is a most lively and delicate instrument of exquisite structure, through which sensations are conveyed to the mind. Its form is the most commodious that can possibly be imagined, for containing the different humours of which it consists, and receiving the images of all external objects. By its situation in the head, it can take in a greater number of objects, than if placed in any other part of the body. And by its power of motion, it can be turned to view those objects, in whatever direction they may appear. The wonder of this examination is greatly increased on investigating the more minute parts and mechanism of the eye. The pupil is contracted or dilated, according to the distance or remoteness of objects, or the increase or diminution of light. The coverings or tunics are of the firmest texture, and softest substance. The vitreous, the aqueous, and the crystalline humours are all remarkable for clearness and transparency, and are formed according to the most exact rules of vision, for collecting the rays of light to a point.

Clumsy and mishapen are the instruments of art, when compared with this finished and beautiful organ. True it is, that the microscope enables us to survey

the smaller works of nature, and that the telescope exalts our prospect to the wonders of the celestial bodies: but these are fixed and limited to certain distances, and particular points of view; one is adapted to measuring the magnitude of a planet, the other to examining the formation of an insect: but the eye wonderfully accommodates itself to every distance within its own extensive sphere. Without diminution of its force, or the energy or distinctness of its powers, it alike surveys the page of learning, embraces the wide prospects of sea and land, and takes in the countless constellations of the heavens. In what manner it can adapt itself to these very different objects and distances, seems not to be clearly understood by anatomists; we know however enough of its effects to see the most evident traces of design in its formation, and its most perfect fitness to the spheres in which different animals move. The study of *optics*, to which these remarks may lead, is one of the most pleasing branches of science.

The *final* cause for the production of animals was a subject of deep and serious speculation among ancient philosophers: Aristotle, Cicero, Seneca, and Pliny concluded, that all things were created for the service of man. In modern times, this prejudice, so indulgent to the pride of mankind, has been strengthened rather than weakened, by more enlarged inquiries, and more intimate acquaintance with nature.

The dominion of man is sufficiently extensive to relieve his wants, administer to his luxury, and indulge his pride, as the lord of the creation. Is there any thing peculiarly august in his countenance, or commanding in his erect figure, which impresses the most savage beasts of the forest with terror, and awes them

into submission? Or does he derive his superiority from his intellectual powers, and his contrivance of various expedients to subdue and tame them? The latter is certainly the more probable supposition. Those animals, which have not yet become acquainted with his prowess, meet his first attacks with the most hardy presumption. The albatross and the whale only fly from his presence, when they have felt the force of his weapons. The enormous bear of the polar regions boldly advances to meet his attack; and the ferocious lion of Zaara, confiding in his strength, ventures singly to engage a whole caravan, consisting of thousands; and when repulsed by numbers, and obliged to retire, he still continues to face his pursuers. On the contrary, in the most populous parts of Africa, when the lion has been frequently hunted by the hardy natives, such is his dread of the human race, that even the sight of a child puts him to flight. In all countries, in proportion as man is civilized, the lower ranks of animals are either reduced to servitude, or treated as rebels; all their associations are dissolved, except such as will answer his purposes; and all their united strength and natural powers are subdued, and nothing remains but their solitary instincts, or those foreign habitudes, which they acquire from human education. Those whose daring, or those whose timid natures admit not of being tamed, seek in the distant recesses of the forests, or the impenetrable fastnesses of the mountains, protection from an enemy, whose superiour sagacity detects their arts, and discovers their retreats; who entraps them with his snares, when not present himself; and who lurking behind the thick covert, discharges his unerring instrument of death,

and slays them at a distance so great, as not to awaken their apprehensions of danger.

It is thus he maintains his power over all living creatures, alike in the frozen regions of the north, and in the hot and burning plains of the torrid zone. Whenever they are discovered by his penetrating eye, the most savage and hostile tribes may for a time hold his empire in dispute: but their opposition and their force serve only to awaken his ingenuity, and call his powers into more daring action. The horse and the dog which enjoy his protection from the earliest period of their lives, are taught to know their master, and to adopt many of his habits of life. Upon the lion and the tyger, which the African leads captives from the forests, or upon the vulture and the eagle, which he secures when young, or brings down from their rapid and sublime flights, he at first imposes the severity of famine, watching, and fatigue, to conquer their savage nature, and reduce them to obedience. The dangers of the ocean stop not the pursuits of man; the sailor catches the ravenous shark, and transfixes the mighty whale. With a boldness still more desperate, the fowler of the north climbs the perpendicular rocks of Norway or St. Kilda, or lowered from their airy summits which overhang the tempestuous deep, explores the nests of the clamorous birds, and plunders them of their eggs and their young. From such arduous labours does man draw the means of his subsistence; from such exertions he acquires peculiar habits of courage and agility, becomes reconciled to his situation, and enjoys it without repining at the easier lot of others.

Thus is constantly executed that primeval law, which secured the empire of the creation to man by the ex-

press voice of divine revelation, even after he had forfeited his innocence, and was debased by guilt. *And the fear of you and the dread of you shall be upon every beast of the earth, and upon every fowl of the air; upon all that moveth upon the earth, and upon all the fishes of the sea; into your hand are they delivered.* Gen. ix, 2.

Much as we may discern in the animal economy to convince us of the benevolence of nature, there are many things, which excite our surprise, and for which we cannot readily account. That she should so far in appearance counteract her own designs, as to make one animal prey upon another, seems extraordinary; but perhaps this law is not so severe as it appears to be, when we consider, that animals have no presentiment of their fate; that contracted as their existence is, all of them evidently enjoy that portion of happiness, which is consistent with their formation and powers. By the present constitution of the animal system the life and happiness of its superior orders are promoted: the bodies of the inferior classes, which from their delicate structure, must more quickly perish, become the materials of sustaining life in others; and a much larger number is enabled to subsist in consequence of animals thus devouring each other, than could be maintained, if they all subsisted upon vegetables; because it is a received principle in physics, that animal food furnishes more nutriment than vegetable substances of equal weight.

It is sufficiently evident, that the various tribes of insects, by preying upon each other, preserve the fruits of the earth from those ravages they would necessarily suffer, should any one species of them multiply too fast; and even those which we drive from our habitations are formed for salutary purposes, and consume

such substances as would become pernicious to the health of man, if left to a gradual decay.

For what reason nature is so prodigal in the production of animals invisible, as well as visible, to the unassisted eye; for what cause such ingenious contrivance is bestowed upon their structure, and so much elegance displayed in their colours and forms; why the more noxious animals should exist, such as the tarantula, the rattle snake, the crocodile, and the izal salya*; are questions which naturalists will not be able to answer, until they are more perfectly acquainted with the general economy of her designs, and the particular relation and dependance of one animal upon another.

CHAPTER V.

THE SIMILARITY OF ANIMALS TO VEGETABLES.

II. THE powers of growth and of the propagation of their respective species are possessed in common by the animal and the vegetable; and the first step, which is made by nature towards endowing a creature with motion, constitutes the connecting link

* A species of bee, armed with a poisonous sting: when it appears in Abyssinia, and the coasts of the Red Sea, so terrified are the inhabitants, that they quit their abodes, and fly to the distant sands of Beja. See Sullivan, vol. iii, p. 287.

of the animal and vegetable kingdoms; and this link is formed by the oyster, and the various kinds of the *zoophites*, or those vegetable substances which are possessed of animation. Yet minute and feeble as their frame appears, wonderful and stupendous are the structures which they raise: witness those immense and dangerous coral rocks, described in Cook's voyage, which rise almost perpendicularly like walls, in the Southern Ocean, and are formed by a species of the lithophytos, to whose labours we owe those beautiful corals, known by the name of madrepores and millepores; whilst the zoophytes, from their protruding from their habitation, in the form of flowers, were once classed amongst the vegetable tribes.

The polypus ranks as the first of plants, and the last of animals, if its propagation, as some naturalists affirm, can be effected by cuttings, similar to the multiplication of plants by slips and suckers.* Difference of formation, and the power of moving from one place to another, seem to constitute the most remarkable discriminations. The lines, which divide these two kingdoms, however, cannot be very accurately marked out; and the common properties of animals and vegetables are much more numerous, than their essential distinctions.†

The poets, both ancient and modern, have indulged the pleasing fiction of attributing to vegetables the passions, actions, and many of the characteristics of

* See Martin's Abridgement of the Philosophical Transactions, vol. ix, p. 17. for the history of the polypus.

† Ray, p. 109. Chambers's Dictionary. Evelyn's Sylva, p. 33. Watson's Essays. Smellie's Philosophy of Natural History, v. i.

animals. The philosophers Plato, Empedocles, and Anaxagoras, did not hesitate to raise them to that distinction; and many of the modern naturalists, for instance, Cardan, Ray, Spallanzani, Watson, and Percival, were induced, by a more accurate inspection of their structure and properties, to favour that opinion. The external form of some plants leads at first view to a curious deception. One of the flowers of the *orchis* tribe resembles a bee, a second a wasp, and a third, still more uncommon, is like a spider. The *cypripedium* of South America in its nectary resembles likewise the body, and in its petals the legs of the large spider; and this ambiguous appearance deters the humming-bird from extracting honey from its flowers.*

Nor is the close analogy of plants with animals less curious, on examining their internal structure and properties. The former are covered with a bark, which resembles the coat of the latter. Leaves, like the hair of animals and the feathers of birds, fall off at certain seasons. Some are clad with coarse garments, to resist all severity of weather; others with

* Several insects of the *mantis* genus are so exactly similar to a cluster of leaves, in their form and colour, that they are called by the sailors, who find them in the woods, walking leaves. When the tentacula of the sea anemone are extended, and they are themselves expanded to their greatest dimensions, they bear so strong a resemblance to a flower, that some naturalists have supposed them to be vegetables. These animals fixed to the rocks, and imperforate at the base, have a mouth situated at the top, which they possess the power of dilating, till it becomes capable of receiving a large muscle: they extract the fish, and return the vacant shell by the same aperture.

more flimsy raiment. The leaves may be considered as the lungs, from the quantity of air which they absorb and exhale. The branches and tendrils of the hop, the vine, and the ivy, resemble legs and arms. The circulation of sap, like that of blood, diffuses vigour and nourishment over all parts of the vegetable. The parts of generation agree with the most minute exactness. The seeds resemble little animals in embryo, and for number can only be compared to the astonishing abundance of nature shown in the spawn of fish. Each seed by degrees enlarges the milky juice, which forms its aliment, and is received from the parent plant, through vessels of the finest texture.

Plants possess an organical, although not a progressive motion. *Mimosa*, the sensitive plant, is well known to shrink at the touch. The *dionæa* closes its leaves the instant a fly settles upon them. The *hedysarum gyrans*, a native of Bengal, has the peculiar property of voluntary motion. Two small appendages or leaflets, situated on each side of the foot-stalk, alternately meet and recede during the greatest part of the day. The heliotrope* points its flowers to the sun, and seems eager to draw nourishment from his genial rays. Flowers always turn towards the light; under a serene sky they expand; rain and storms cause many of them, particularly trefoil, wood-sorrel, mountain ebony, wild senna, and the African marigold, to be contracted; and at night they bow their heads, and fold up their leaves, as if yielding to the power of sleep. Some of them, like some animals,

* The heliotrope, or turnesole, is the heliotropium tricoccum, very common in the environs of Montpellier and in Germany, but it is very different from the English sunflower.

sleep during the day, and wake during the night. The *cactus grandiflorus* opens its flowers on the setting of the sun, and closes them at break of day. The *jalapa mirabilis* never expands its flowers, but in the evening. The influence of heat in the vernal season is the same on animals and vegetables; for when the birds begin to warble in the forests, and the fish to move in the deeps, the plants shoot forth their flowers, and propagate their kind. The wood anemone begins to blow in Sweden when the swallow arrives; and the marsh marigold flowers in Britain when the cuckoo sings.

These and various other analogies are sufficient to show, that the animal and vegetable kingdoms approach very near, or rather are united to each other; and that the ordinary distinctions made between them are more serviceable for the common purposes of discrimination, than consistent with the precision of true philosophy, or the essential differences of nature.

SECTION I. BOTANY.

This train of observation leads us by easy steps to the consideration of that pleasing science, which opens a regular prospect of the vegetable kingdom, and comprises the knowledge of all kinds of plants. The study of botany is not only an elegant amusement, and leads to a beautiful display of the order and variety established by nature; but from the different and important uses of plants in food, raiment, medicine, and many arts, it is of real and essential service to mankind.*

* Martyn's Letters on Botany. Ray, p. 207, &c. Linnæi Op. p. 24, &c. Loves of the plants, vol. i. Amœnitates Acad. vol. vi, p. 311, &c. Derham's Physico. Theol. p. 483, &c.

The range of botany is wide and extensive, from the small moss and the fungi, which are intermixed with the common grass, to the towering pine and the majestic oak. The various kinds of grass, which cover the earth; flowers of all hues and forms, which exhale the most fragrant odours; beautiful shrubs and stately trees, are all subjects of the dominions of Flora. "Linnæus, says Dr. Darwin, has divided the vegetable world into twenty-four classes; these classes into about an hundred and twenty orders; these contain about two thousand families, or genera; and these families about twenty thousand species, beside innumerable varieties, which the accidents of climate or cultivation have added to these species."

This number of plants must be exceedingly deficient if we consider how little is known of the vegetable productions of the globe. We are very slightly acquainted with the interior parts of Africa, with the three Arabias, the two Americas, with New Guinea, New Zealand, and the innumerable islands of the Southern Ocean. What have we ascertained in the immense Archipelagos of the Philippines and Moluccas, or of most of the Asiatic islands? The vast coasts of New Holland, and the island of Otaheite, are said to have a botany peculiar to themselves.

"Another Flora there of bolder hues,
And richer sweets beyond our garden's pride,
Plays o'er the fields, and showers with sudden hand
Exuberant spring."

THOMSON'S SUMMER.

Linnæus, the celebrated professor of Upsal, and president of the academy of Stockholm, rose superior

to the difficulties of poverty, and raised himself to the highest distinction as a most laborious and accurate physiologist. With an extent and clearness of intellect, and a diligence of research peculiar to himself, he undertook the arduous task of reforming the whole system of botany. Before his time, the description of plants was so perplexed with difficult and abstruse terms, that it only tended to make their nature more obscure, and their study more repulsive. In two successive works, he has determined the genera and species of plants, in such a manner, that by retaining all the old names, which agreed with his new rules, and reforming all the rest, he established a clear nomenclature, founded upon the true principles of the art. He confined himself to a small number of technical words well chosen and appropriate, in order to make short definitions of the true character of plants. The new language of botany, which he thus invented, although it necessarily departed from the classical model, yet it was not encumbered with the tedious circumlocutions of the old descriptions, and is in general short, precise, and expressive. From the description of the vegetable tribes, he proceeded to assign them particular names, and thus familiarized them in such a manner, that, by his appropriate appellations, a botanist is enabled, at first sight, to name any plant he has ever seen before, as well as to know its nature by its fructification, and understand its properties by an apt and clear description.

But the glory of Linnæus arose from his making the sexual discriminations of plants the basis of his system. Those parts, which had before been regarded as useless and superfluous, were raised to the rank that nature had originally designed for them. This

was a work of great labour, and required the most accurate observation; for not only the genera, but every species were to be examined by their stamina and pistils, as he determined those to be the only parts essentially necessary to fructification. This distinction appeared to many, at first sight, to be too frivolous, as they thought that nature had not been scrupulously exact in her productions: but since the Linnæan system has been established, there is no student of botany, who is able to determine the precise character of any genus, without having the accurate idea of these discriminating parts.

The system of Linnæus appears to be more conformable to nature than any yet offered to the world: it has this peculiar excellence, that the name of each vegetable gives us its description: and if there be any defect in his four and twenty classes, it must be attributed to the necessary deficiency of any artificial arrangement, when applied to the infinite variety of nature.

Without any intention to detract from the reputation of this great naturalist, we may venture to assert, that his merit consists not so much in the first discovery, as in the adoption and establishment of the sexual system. Plain intimations of it are given by some of the ancient naturalists, particularly by Aristotle and Theophrastus. Herodotus mentions, that it was a custom of the natives of Babylon to carry the flowers of the male to the female palm-tree, and thus assist the operations of nature in producing fruit. This curious fact was confirmed by the observation of Hasselquist, in the middle of the last century. Nor did it escape the researches of Ray and Millington, who flourished many years before the time of Linnæus.

Grew, the ingenious author of the anatomy of vegetables, expressly affirms, that every plant is male and female; he has pointed out the close analogies between the parts of fructification and those of generation, and the correspondent offices and effects of each.

All plants seem to grow in the same manner: the genial warmth of the sun, the refreshment of the rains, the same soils appear to suit their respective species; and upon a superficial glance, they seem to have the same common parts. A chymical analysis discovers the same constituent principles in all, that is to say, calcareous earth, oil, water, and air, with a portion of iron, to which they owe their beautiful colours. Yet although composed of similar materials, their juices to the eye, and to the taste, appear as various as their forms. The soporific milk of the poppy, the acrid but equally milky juice of the spunge, the acid of the sorrel, the saccharine sap of the sycamore and maple, and the resin of the tribe of pines, bear no resemblance to each other. Various are the articles of use and pleasure, which man receives from the vegetable world; yet how many of their qualities remain undiscovered! And the investigation of these qualities is rendered highly important by considering, that, copious as our list of esculents may be, there are doubtless many others, which might be added; and perhaps a process might be discovered, by which some plants hitherto neglected may be rendered nutritious, as an agreeable part of our common diet, or salutary, as introduced into the materia medica.

The inward structure of plants is as regular and various, as their external forms are elegant and well proportioned. This formation cannot have been origi-

nally designed, merely to attract and gratify the admiring eye of an accidental spectator, but rather to render the production more perfect. The root, trunk, branch, leaf, flower, fruit, and seed, have each its peculiar character and form, and the microscope displays all their latent beauties to the eye. Every one of them when dissected, and seen by the aid of a glass, appears to be interwoven with complicated meshes, which vary in an endless diversity, and charm the eye by the perfect regularity of the net work. The transverse section of a pear, when magnified, shows first the acetary, which joins the core, composed of regular circles; secondly, the outer parenchyma or pulp, formed of globules, ligneous fibres, and radiated vessels, disposed in the most beautiful order; and thirdly, the ring of sap vessels and skin formed of circles, and strait lines or ducts. No part in the contexture of the smallest fibre or leaf is unfinished, but is formed with the most minute exactness. The seeds of plants have the appearance of shells, unlike in form, and diversified with spots and stripes. Every seed possesses a reservoir of nutriment, designed for the growth of the future plant. This is the matter prepared by nature for the reproduction and continuation of the whole species. This nutriment consists of starch, mucilage, or oil, within the coat of the seed, or of sugar and subacid pulp in the fruit, which belongs to it. The sections of the various kinds of trees are crossed with the greatest number of regular figures, which the imagination can conceive. The lines are more or less near or remote, according to the solidity or softness of the wood. The lines which form the texture of fir trees, are distant; but those of oak are

close and compact.—And this difference of texture may serve to account for their greater or less solidity, and the difference of time requisite for them to arrive at maturity.

The different vegetable productions are no less numerous than useful. The purposes to which trees are applied, are well known, from the flexible willow, which forms the basket, to the hardy oak, which composes the most substantial parts of a ship of war. All possess different qualities, adapted to their different purposes. The meanest, and in appearance the most unpleasant, have their use; even the thistle is not only the food of some animals, but is serviceable in making glass. There is scarcely a plant which, although rejected as food by some animals, is not eagerly sought by others. The horse yields the common water hemlock to the goat, and the cow the long leafed water hemlock to the sheep. The goat again leaves the aconite, or bane berries to the horse. The euphorbia or spurge so noxious to man is greedily devoured by some of the insect tribes. The aloe is a magazine of provisions and of implements to the Indians, who inhabit the banks of the Ohio and the Mississippi. Some plants, as rhubarb and opium, alleviate the tortures of pain; and some, as the quinquina, or Peruvian bark, can subdue the rage of the burning fever. Wheat, the delicious and prolific grain, which gives to the northern inhabitants of the world their wholesome nutriment, grows in almost every climate. Where excessive heat or other causes prevent it from coming to perfection, its place is amply supplied by the bread fruit, the cassavi root, and maize, and more particularly by rice, which is the common aliment of that great portion of mankind, who inhabit the warm regions of the

earth. Every meadow in the vernal season brings forth various kinds of grass; and this spontaneous and most abundant of all vegetable productions requires only the labour of the husbandman to collect its harvest. The iron-wood, solid as marble, furnishes the Otaheitan with his long spear and massy club. The wild pine of Campeachy retains the rain water in its deep and capacious leaves, not less for the refreshment of the tree itself, than of the thirsty native of a burning soil. The cocoa of the East and West Indies answers many of the most useful purposes of life to the natives of a warm climate. Its bark is manufactured into cordage and clothing, and its shell into useful vessels; its kernel affords a pleasant and nutritive food, and its milk a cooling beverage; its leaves are used for covering houses, and are worked into baskets: and its boughs are of service to make props and rafters. The rein deer of the Laplander, so essential to his support and subsistence, could not survive through the tedious winter, without the lichen rangiferinus, which he digs from beneath the snow. All these productions and the various trees which produce cork and emit rosin, turpentine, pitch, gums, and balsam, either supply some constant necessity, obviate some inconvenience, or contribute to some use or gratification of the natives of the soils where they grow, or the inhabitants of distant climates.

Among vegetable productions, we cannot fail to notice the tribes of *mosses*, of such variety in their forms, that they scarcely yield to plants in number; and although extremely minute, yet of such an admirable structure, that they excel the stately palms of India, or the sturdy oaks of the forest. These mosses are dried up in summer, but in winter they revive,

and assume a peculiar verdure; and as the season advances, they protect the roots of plants from cold, from the chilling blasts of spring, and the scorching heat of the summer sun.

Of the ardour with which the pursuit of botany is capable of inspiring its votaries there have been many eminent instances. The reformation of the system by Linnæus was a strong incitement to his pupils to explore the most distant countries. Tornstroem travelled into Asia, and Hasselquist into Egypt and Palestine, where he fell a sacrifice to a lingering disorder. The fruits of his labours were not however lost to the world, as his botanical collections enrich the royal cabinet of Stockholm. Osbeck explored China and Java, Loefling went into Spain, and afterwards to South America, where he died. Thunberg travelled in Europe, Asia, and Africa; and has given a more particular account of Japan than any other traveller. Sparrman performed a voyage to the Cape of Good Hope, and has described the most remarkable animals and vegetables in that part of the world. Linnæus himself traversed Sweden and Lapland, where he braved the horrors of deserts and precipices, and suffered extreme hunger, thirst, and cold. In the researches of natural history the diligence of men of other countries has been conspicuous. Sir Joseph Banks and Dr. Solander performed a voyage round the globe with captain Cook, and brought home many vegetable treasures of the Southern Islands. The diligence of Dr. Sibthorpe, jun. late professor of botany in Oxford, deserves to be well known. He encouraged, by his testamentary munificence, that pursuit to which he sacrificed his health, and finally his life, by two excursions into the east; and his *Flora Græca* will, no doubt, be a valua-

ble monument of his scientific skill, and laborious researches. Bartram explored the deserts of North America, and has supplied a fund of information to the admirers of the wild productions of nature.

Uncertain as our climate is, and subject to the greatest changes of weather, we may still find in England sufficient scope to gratify our taste by an extensive survey of the vegetable beauties of the creation. Exclusive of the well known gardens of Windsor, Richmond, Kew, and Nuneham, there is scarcely a seat of any private gentleman, which does not present the prospect of flowers distinguished by the richest colours, and most fragrant perfume. Every clime supplies likewise its tributary shrubs of various leaf, colour, and form to Great Britain; and few are the spots where they can be seen flourishing in a manner more nearly approaching the verdure and luxuriance of their native soils, than in the delightful pleasure grounds of the Duke of Marlborough at Blenheim, and the marquis of Buckingham at Stow. Or if the traveller wishes to behold nature in her original state, where the hand of art has not clothed her with exotic ornaments, let him repair to the New Forest, to the woods that overhang the foaming streams of the Derwent, reflect their images in the lakes of Winander Mere, and Ullswater, or diversify the romantic prospects of Duncombe and Piercefield: such wild and solemn scenes may suggest the pleasing recollection of the first age of the world, when the parents of the human race, blessed with unspotted innocence, roved amid the blooming flowers and umbrageous groves of paradise, and there enjoyed the society of angels, and even of the great Creator himself.

"These are the haunts of meditation; these
The scenes where ancient bards th' inspiring breath
Ecstatic felt; and, from the world retired,
Conversed with angels, and immortal forms,
On gracious errands sent."

THOMSON'S SUMMER.

The principles of botany are sufficiently regular, to give it the form and precision of science. And yet the true botanist is far from contenting himself with mere books: his observations are united with reading. Linnæus, Curtis, and Withering, are authors, whose works may be studied to great advantage; but they are rather to be verified in the fields, than only perused in the closet. To range in search of plants, and to examine their correspondence with their descriptions, is a source of very high gratification; as it proves the truth of the principles, upon which this pleasing study depends.

The botanist follows nature into her most retired abodes, and views her in her simple taste, and native majesty. He remarks some of her productions disfigured by cultivation in gardens, where amid all the varieties of the apple and the pear, however distinguished by their colour, size, and taste, he observes, that there is but one original species of each, and that they have respectively but one radical character. He beholds the wonderful prodigality of nature, even in the composition of the common daisy, which consists of more than two hundred flowers, each including its respective corolla, germ, pistil, stamina, and seed, as perfectly formed as those of a complete lily, or hyacinth. And he sees this diversity as fully illustrated in the different sorts of grass, a term which, although

it commonly conveys only one notion to the vulgar mind, and one object to the undiscerning eye, consists of five hundred different species, each formed with infinite beauty and variety. From others he particularly distinguishes the elegant *briza media*, so common in the fields, and so remarkable for its delicate hair-like stem, trembling at every breeze; the *anthoxanthum odoratum*, which gives its fragrance to the new mown hay; and the *stipa pennata* with its waving plumes resembling the long feathers of the bird of paradise. The botanist enjoys a pleasing and innocent amusement, most agreeably combined with a love of rural retirement, and which gives a new and growing interest to every walk and ride, in the most delightful season of the year. He collects a harvest from all countries for the purpose of reviewing his treasures at leisure, and growing rich in scientific acquirements. He enjoys a satisfaction similar to that which the naturalist experiences from preserving and surveying the specimens of the animal and mineral kingdoms. "Among the luxuries of the present age, the most pure and unmixed is that afforded by collections of natural productions. In them we behold offerings as it were from all the inhabitants of the earth; and the productions of the most distant shores of the world are presented to our sight and consideration: openly and without reserve they exhibit the various arms, which they carry for their defence, and the instruments, with which they go about their various employments; and while every one of them celebrates its Maker's praise in a different manner, can any thing afford us a more innocent pleasure, a more noble or refined luxury, or one that charms us with greater variety?" Reflections of Linnæus, p. 20.

SECTION II. MINERALOGY.

III. The curiosity of man, still restless and active, continues its progress along the paths of nature with unabating ardour. After he has surveyed the wonders of the animal and vegetable kingdoms, he proceeds to those masses of unorganized matter, which are either found upon the surface, or concealed in the recesses of the earth; and thus he is led to mineralogy. The term mineral is commonly applied to any substance simple or compound, dug out of a subterraneous place or *mine*, from whence it takes its denomination. This science relates 1. to earth and stones in general; 2. salts; 3. Inflammables; and 4. metals.

1. *Earth and stones in general* are, 1st. mould, the support of vegetables; 2nd, clays, which, mixed with water, harden in the fire into bricks, delf, china, &c. 3d, calcareous substances, as chalks, marls, limestones, marbles, convertible by heat into quicklime, and gypsum into alabaster; 4th, talcs, which are found in flat, smooth laminæ; 5th, slates also split into laminæ; these with a variety of stones from freestone, or sand, to granite, porphyry, flint, and substances still harder, such as precious stones, are known by various properties, and are accordingly applied to different purposes; some, in addition to being serviceable in building, are used as whetstones; some strike fire with steel: others are polished to glitter in the dress of the fair, or decorate the furniture of the opulent; and others, melted by fire, form the transparent glass.

2. Salts are acids, or alkalis. The acids and alkalis, combined together, form neutral salts.

3. Inflammables are sulphur, or bitumens. These substances are both derived from the spoils of vegetables or animals.

4. Metals are brittle semi-metals, or malleable metals.

Metallic substances are distinguished from all other productions by their superior brilliancy, specific gravity, and opacity. They are generally concealed in the bowels of the earth, combined with other substances; and they require the industry and ingenuity of man to extract and clear them from their original incrustations, and give them their most valuable qualities. Metals may be distinguished into such as are ductile, and such as do not possess that property; the latter are called semi-metals, and for the most part approach in their qualities to stony or saline substances. The former possess the metallic qualities in a higher degree.

Arsenic, cobalt, nickel, bismuth, antimony, zinc, and manganese, are called semi-metals. Tungsten, wolfran, and molybdena, are also metallic substances. Lead, tin, iron, copper, mercury, silver, gold, and platina, are metals; the last three are called perfect metals, because they suffer no change by fusion, or the longest continued heat. Even in metals, rude and mis-shapen as they may appear, that law of the creation, by which different unorganized productions are impressed with regular forms, does not cease to exist in the various experiments which are made upon them. We find the ores of metals, as well as other fossile substances, under determinate forms, or geometrical figures of various kinds: and when by art they are reduced to a regulus, or metallic form, the same disposition still appears. When the surface of melted

metal begins to congeal, the part beneath, yet in a state of fluidity, will exhibit regular chrystalline shapes. The breaking of a piece of metal likewise shows its grain, or the regular disposition of its particles into crystals, or determinate figures.

As most of the substances of which mineralogy treats have been used either for the necessity of mankind, such as iron and clay, or for ornament and luxury, as gold, marble, and diamonds; traces of this pursuit may be found in the most remote times. It remained for the philosophical spirit of the last age to give it the regularity and the dignity of a science, and to place minerals in their respective classes, according to their external or internal similarity. This knowledge may be acquired by remarking the colour and configuration of their parts, consistency, and weight.

The minerals to be found in England particularly merit observation, as they are both curious and useful. Amber, jet, vitriol and allum are found in considerable quantities; our canal coal approaches nearly to the beauty of jet, and even our common coal for firing is of a superior nature. The English earth and gravel are of the best quality; and we have stones, slates, flags and other fossils necessary for building in great abundance. Tin is another article in which England, from the time of the Phenicians, has always had the preeminence. The county of Cornwall alone produces more than all the world besides. Our lead ore is richer than in other countries, runs more fluently in the fire, requires less trouble and expense in working, and is when wrought very fine and ductile. Our black lead, or *wadd*, found in Cumberland is a mineral of great use and value in several branches of trade and

arts. Copper and iron are found here in great plenty, and several ores of these metals, particularly in Anglesey, have of late been discovered, and brought into use, which were unknown before the recent improvements in chemistry.

The researches of man into the *fossil* kingdom will likewise afford him an abundant source of amusement and instruction. He will discover the most astonishing variety of marine productions in all parts of the earth, and in every different soil. In the crumbling chalk, the solid marble, the dusty gravel, and even the depths of the most inland valleys, and on the summits of the highest mountains, he will behold the spoils of the ocean, exhibited under the several appearances of petrified fish, beds of shells, and sea plants. "The Alps, the Apennines, the Pyrenees, Libanus, Atlas, and Ararat, every mountain of every country under heaven, where search has been made, all conspire in one uniform and universal proof, that the sea has covered their highest summits. If we examine the earth we shall find the mouse deer, natives of America, buried in Ireland; elephants, natives of Asia and Africa, buried in the midst of England; crocodiles, natives of the Nile, in the heart of Germany; shell-fish, never known but in the American seas, together with skeletons of whales in the most inland regions of England; trees of vast dimensions with their roots and tops at the bottom of mines and marls found in regions, where such trees where never known to grow, nay where it is demonstrably impossible they could grow." Calcott on the Deluge, p. 359. Such are the awful memorials of that universal deluge, ordained as a punishment for the sins of the primeval race of men, of which all parts of the world—the testimony of writers of all ages, and

particularly the holy scriptures, afford the most convincing proofs*.

As the external appearance may in many cases be the same in such masses of unorganized matter as differ widely in their internal constitution, mineralogy calls in the aid of chemical processes to prevent confusion: and the knowledge of the internal constitution, and essential parts of bodies is more fully acquired by regarding the changes produced in them by the action of fire, or the action of dissolvents, used to extract the virtues of ingredients, commonly called *menstruums*.

CHEMISTRY.

The object of this science is to discover the nature and properties of bodies both solid and fluid. I recommend to the reader the excellent preliminary discourse of Chaptal's Chemistry, in which the uses and advantages of this interesting and important science are clearly and fully stated.

"The natural history of the mineral kingdom, unassisted by chemistry, is a language composed of a few words, the knowledge of which has acquired the name of mineralogist to many persons. The words calcareous stone, granite, spar, schorle, feld, schistus, mica, &c. alone composed the dictionary of several amateurs of natural history; but the disposition of these substances in the bowels of the earth, their respective positions in the composition of the globe, their

* See Parkinson's Organic Remains of a Former World; Woodward's Essay towards a natural History of the Earth. Genesis vii. Heb. xi, 7, and 2 Pet. iii.

formation and successive decompositions, their uses in the arts, and the knowledge of their constituent principles, form a science, which can be well known and investigated by the chemist only." Chaptal's Chemistry, Preliminary Discourse

Chemistry was a long time ridiculed and neglected on account of the pretensions set up by many of its votaries to extraordinary discoveries. It was once the darling passion of the avaricious, and the phantom which deluded the hopes of the visionary. For the honour of the present age, it is now patronized by men of science and enlightened judgment, and is brought to such perfection, as to gain a respectable place among the arts. In the clearness of its principles, the solidity of its conclusions, and its reference to common or to philosophical uses, it is inferior to none.

For the attainment of his object the chemist depends upon the accuracy of his experiments, although even from his disappointments some agreeable result unexpectedly arises; and his application is frequently rewarded by very curious discoveries. The field of experiments is so vast and spacious, that the most diligent investigation cannot completely traverse it, nor any continuance of time exhaust its variety. The properties of bodies have never been all clearly ascertained, and much therefore remains to be done, before future experience will terminate her discoveries, and the pleasure of novelty will cease to stimulate persevering industry. The diligent chemist will ever have a wide range for his researches, in endeavouring by his experiments to discover the hidden virtues of substances; and, finally, to apply them to the improvement of arts, and the general benefit of mankind.

"Chemistry bears the same relation to most of the arts, as the mathematics have to the several parts of science, which depend on their principles. It is possible, no doubt, that works of mechanism may be executed by one, who is no mathematician; and so likewise it is possible to dye a beautiful scarlet without being a chemist: but the operations of the mechanic, and of the dyer, are not the less founded upon invariable principles, the knowledge of which would be of infinite utility to the artist." Chaptal's Chemistry.

"This art is not only of advantage to agriculture, physic, mineralogy, and medicine, but its phenomena are interesting to all the orders of men; the applications of this science are so numerous, that there are few circumstances of life, in which the chemist does not enjoy the pleasure of seeing its principles exemplified. Most of those facts, which habit has led us to view with indifference, are interesting phenomena in the eyes of the chemist. Every thing instructs and amuses him; nothing is indifferent to him, because nothing is foreign to his pursuits; and nature, no less beautiful in her most minute details, than sublime in the disposition of her general laws, appears to display the whole of her magnificence only to the eyes of the chemical philosopher." Chaptal's Chemistry.

All material bodies are the subjects of chemical research. The solid and fluid matter composing the terraqueous globe which we inhabit; also air, light, and heat are subjects proper for the examination of the chemist.

The arts of dying, bleaching, tanning, glass-making, printing, working metals, &c. are purely chemical. The vegetation of plants, and some of the most important functions of animals have been explained upon

the principles of chemistry. By means of this science agriculture and gardening have been greatly improved in Britain and other countries.

Chemistry directs the labours of the husbandman and the rural economist. In the dairy, milk cannot be kept sweet and fresh, butter and cheese cannot be made without skill founded on chemical principles.

Cookery, and the art of curing and preserving beef, bacon, hams, and all animal and vegetable substances are entirely chemical. The art of brewing, distilling, and making all sorts of fermented liquors depends upon the principles of chemistry.

In medicine and pharmacy great benefits have been derived from the discoveries of chemical philosophers.

The chemist resolves bodies into their elementary principles, and examines their nature and properties when in a detached or simple state. He thus discovers their mutual relation to one another, and can recombine them in proportions different from those in which they were originally united. Hence new and useful compounds may be formed, which nature does not produce.

But Chemistry is not only valuable as an art which supplies many of the wants, comforts, and luxuries of life. Its objects are sublime and beautiful in another sense; for it is intimately connected with most of the phenomena of nature, as clouds, rain, snow, dew, wind, earthquakes, &c.

Thus may the curiosity of man be gratified by surveying the productions of nature; and thus the farther he extends his researches, the more reason will he find

to admire the general economy of created beings. Whatever objects his eye beholds, whether small or great, he will see design and order impressed upon them, in the strongest and most distinct characters. The small and distant stars scattered over the blue vault of heaven, apparently so numerous as to baffle calculation, whether they shine only to afford us light, or whether they are the suns of other systems, and thus proclaim the illimitable extent of Almighty power, cannot fail to strike us with astonishment. The orbits of the planets, and the velocity with which they move, are both uniform and unchanging; their gravity is regulated by an infallible measure, and their *general* harmony is not interrupted by the slightest variation, disorder, or accident.

It may be proper to inform the reader that some disturbances are perceived by astronomers in the motions of the planets, which have led some of them to believe that the solar system would ultimately be destroyed. But all this apparent disorder, all the perturbations which are observed, nay, *all which can exist* in this system, are periodical, and are compensated in opposite points of every period. The mean distances of the planets, and the mean periods of their revolutions, remain forever the same; so that, finally, the solar system seems calculated for almost eternal duration, without sustaining any deviations from its present state which will be perceived by any but astronomers. The display of wisdom in the selection of this law of mutual action, and in accommodating it to the various circumstances which contribute to this duration and constancy, is surely one of the most engaging objects that can attract the attention of mankind. The correction of these perturbations is the most wonderful

event that occurs to us in the phenomena of the solar system, and must be attributed to the superintending providence of God. That so many disturbing forces of the planets should be exactly compensated at the end of a certain period must be the effect of design, and cannot be ascribed to chance. "Cold, says professor Robison, must be the heart that is not affected by this mark of beneficent wisdom in the Contriver of the magnificent fabric, so manifest in selecting for its connecting principle a power so admirably fitted for continuing to answer the purposes of its first formation." See Robison's Mechanical Philosophy, vol. i, p. 376 and 434.

The *Earth* performing its annual and diurnal circuit around the blazing centre of the system, so as to produce a regular change of seasons, and a succession of light and darkness :—the *ocean* giving to mankind the constant advantages of its tides, and though frequently tempestuous, yet obeying the invariable laws of its flux and reflux, and never flowing beyond its prescribed bounds :—the *air*, which, from its pressure on the surface of our bodies, would crush us to the ground unless prevented by the elasticity of the air within us forming an exact counterbalance; all these things clearly demonstrate the power, the wisdom, and the benignity of an omnipotent Creator. Time and space, substance and heat, are the vast materials of nature; the wide universe is the sphere in which they act; and life, activity, and happiness, constitute the end of their operations. The whole race of *animals* preserved to the present time in the same flourishing state in which they were at first created; the rules which govern them, not varied by capricious chance, but administered with unalterable regularity; the im-

pulse of instinct directing them to wholesome food, to the propagation of their kind, and to commodious habitations; the structure of their frames, and of every particular organ of action, so suitable to their immediate use; the several tribes of creatures subordinate to each other, conducive in various respects to the good of man; and the abundant provision made for their subsistence and continuance, are all evident and incontestible proofs of skill, contrivance, and power.

The human race, and all other beings, are formed with such exquisite ingenuity, that man is utterly insufficient to imitate the most simple fibre, vein, or nerve, much less to construct a hand, or any other organ of contrivance or execution. All living creatures, plants, animals, and men, constitute one chain of universal being from the beginning to the end of the world. Our own structure, and the formation of all around, above, and beneath us, in the animal, vegetable, and mineral kingdoms, proclaim the operations of an all-wise and all-powerful Being, and the constant agency of his over-ruling providence. See Boyle's Usefulness of Natural Philosophy, part i, essay 3.

——————— Some within a finer mould
Are wrought, and tempered with a purer flame.
To these the Sire omnipotent unfolds
The world's harmonious volume, there to read
The transcript of himself. On every part
They trace the bright impressions of his hand
In earth or air, the meadow's purple stores,
The moon's mild radiance, or the virgin's form
Blooming with rosy smiles.

Akenside's Pleasures of the Imagination.

" False schemes of natural philosophy like those of the ancients, may lead to atheism, or suggest opinions concerning the Deity, and the universe, of the most dangerous consequences to mankind. True philosophy will lead you to believe in, and adore, the Supreme Being; and as it continually exhibits brighter and brighter instances of his wisdom and power, it removes also, in part, that veil spread over nature, which conceals from our view its awful depths and majestic heights; and thus enables you to see the glories of the Almighty shining in this his exalted creation, and hence instructs you to raise your voice in praises to *Him*, who is alone worthy to receive glory and honour and power; for it is by *Him* that all things were created, and also that they are continually preserved."—Adams's Lectures, v. i, p. 22.

" That one great and universal mind, who made all things by his power, and preserves them in his goodness, is the first and only cause, operating at all times and in all places, and producing by an exertion of his will all the various phenomena of the material system. This first and universal cause, however, in the ordinary administration of his providence, hath condescended to employ second causes as the instruments of his will by which he acts; which second causes he hath also appointed in his wisdom to operate through every part of his creation by general laws. To trace the hand of the Almighty through all his works, to investigate these general causes, and to erect them into the laws of physics, is the sublime, the delectable, and honourable employment of the natural philosopher."—Tatham's Chart and Scale of Truth, vol. i, p. 133.

"The view of nature, which is the immediate object of sense, is very imperfect, and of a small extent; but, by the assistance of art, and the help of our reason, is enlarged till it loses itself in an infinity on either hand. The immensity of things on the one side, and their minuteness on the other, carry them equally out of our reach, and conceal from us the far greater and more noble part of physical operations. As magnitude of every sort, abstractly considered, is capable of being increased to infinity, and is also divisible without end; so we find that in nature the limits of the greatest and least dimensions of things are actually placed at an immense distance from each other. We can perceive no bounds of the vast expanse in which natural causes operate, and can fix no border or termination of the universe; and we are equally at a loss when we endeavour to trace things to their elements, and to discover the limits which conclude the subdivisions of matter. The objects which we commonly call great, vanish when we contemplate the vast body of the earth: the terraqueous globe itself is soon lost in the solar system: in some parts it is seen as a distant star: in great part it is unknown, or visible only at rare times to vigilant observers, assisted, perhaps, with an art like to that by which *Galileo* was enabled to discover so many new parts of the system. The sun itself dwindles into a star; Saturn's vast orbit, and the orbits of all comets crowd into a point, when viewed from numberless places between the earth and the nearest fixed stars. Other suns kindle light to illuminate other systems, where our sun's rays are unperceived; but they are also swallowed up in the vast expanse. Even all the systems of the stars that sparkle in the clearest sky,

must possess a small corner only of that space over which such systems are dispersed, since more stars are discovered in one constellation by the telescope, than the naked eye perceives in the whole heavens. After we have risen so high, and left all definite measures so far behind us, we find ourselves no nearer to a term or limit; for all this is nothing to what may be displayed in the infinite expanse, beyond the remotest stars that ever have been discovered.

If we descend in the scale of nature towards the other limit, we find a like gradation from minute objects to others incomparably more subtile, and are led as far below sensible measures as we were before carried above them, by similar steps that soon become hid to us in equal obscurity. We have ground to believe, that these subdivisions of matter have a termination, and that the elementary particles of bodies are solid and uncompounded, so as to undergo no alteration in the various operations of nature or of art. But from microscopical observations that discover animals, thousands of which could scarce form a particle perceptible to the unassisted sense, each of which has its proper vessels, and fluids circulating in those vessels; from the propagation, nourishment, and growth of those animals; from the subtilty of the effluvia of bodies retaining their particular properties after so prodigious a rarifaction; from many astonishing experiments of chemists; and especially from the inconceivable minuteness of the particles of light, that find a passage equally in all directions through the pores of transparent bodies, and from the contrary properties of the different sides of the same ray; it appears that the subdivisions of the particles of bodies descend by a number of steps or degrees that surpass all imagina-

tion, and that nature is inexhaustible by us on every side.

Nor is it in the magnitude of bodies only that this endless gradation is to be observed. Of motions, some are performed in moments of time, others are finished in very long periods; some are too slow, others too swift, to be perceptible by us. The tracing the chain of causes is the most noble pursuit of philosophy; but we meet with no cause but what is itself to be considered as an effect, and are able to number but few links of the chain. In every kind of magnitude, there is a degree or sort to which our sense is proportioned, the perception and knowledge of which is of the greatest use to mankind. The same is the ground work of philosophy; for though all sorts and degrees are equally the object of philosophical speculation, yet it is from those which are proportioned to sense, that a philosopher must set out in his inquiries, ascending or descending afterwards as his pursuits may require. He does well indeed to take his views from many points of sight, and supply the defects of sense by a well regulated imagination; nor is he to be confined by any limit in space or time: but as his knowledge of nature is founded on the observation of sensible things, he must begin with these, and must often return to them to examine his progress by them. Here is his secure hold; and as he sets out from thence, so if he likewise trace not often his steps backwards with caution, he will be in hazard of losing his way in the labyrinths of nature.

"From this short view of nature, and of the situation of man, considered as a spectator of its phenomena, and as an inquirer into its constitution, we may form some judgment of the project of those, who, in composing their systems, begin at the summit of the scale, and

then by clear ideas pretend to descend through all its steps with great pomp and facility, so as in one view to explain all things. The processes in experimental philosophy are carried on in a different manner; the beginnings are less lofty, but the scheme improves as we arise from particular observations to more general and more just views. It must be owned, indeed, that philosophy would be perfect, if our view of nature, from the common objects of sense to the limits of the universe upwards, and to the elements of things downwards, was complete; and the power or causes that operate in the whole were known. But if we compare the extent of this scheme with the powers of mankind we shall be obliged to allow the necessity of taking it into parts, and of proceeding with all the caution and care we are capable of, in inquiring into each part. When we perceive such wonders, as naturalists have discovered in the minutest objects, shall we pretend to describe so easily the productions of infinite power in space, that is at the same time infinitely extended and infinitely divisible! Surely we may rather imagine that in the whole there will be matter for the inquiries and perpetual admiration of much more perfect beings." Maclaurin's Account of Newton's Philosophical Discoveries, p. 15.

It is thus, O GREAT AUTHOR of all things, PARENT OF LIFE, and SUPREME GOVERNOR of the world, we discover thee in thy works! Dark clouds rest upon thy hallowed and inaccessible habitation: but the beams of glory, darted from the eternal throne of thy divine majesty, shine around us on every side. We cannot with our mortal eyes behold thy presence; we cannot even look stedfastly upon the orb of day, thy glorious emblem: but we can in every part of the globe

trace the plain vestiges of thy power, thy wisdom, and thy benevolence. Wherever a plant takes root and flourishes, wherever an animal appears, there art thou plainly discoverable. In the depths of the Pacific Ocean, in the boundless wilds of Africa, upon the snowy summits of the Alps, and along the vast range of the stupendous Andes, thou mayest be traced. Thy power and thy wisdom are evident in the formation of the fragrant rose, and the towering oak; in the gentle lamb, and the roaring lion; in the melodious nightingale, and the rapacious vulture. The exquisite construction of their respective parts proves the unskilfulness of man, even in his most elaborate productions, and demonstrates thy admirable invention. Compared with thy works, how small, imperfect, and trifling are all the labours of art! since all that thou doest is marked with consummate skill and excellence. Thou hast concealed from our strictest and most persevering examination a knowledge of their essence; and as that knowledge would neither minister more abundantly to our comforts, nor augment our happiness, thy universal benevolence is displayed in what thou deniest, as well as in what thou givest. In thy hands matter is supple, and prompt to receive every impression. At thy command it is formed into images, the most strongly marked by character, and the most varied by form—from the stern lineaments and shaggy covering of the lion, to the soft plumage and delicate shape of the dove. Thou hast impressed a never failing symmetry upon every created being of the same species, and endowed it with the same properties; and this unchanging execution and perpetuity of thy original design proves to us the undeviating regularity of thy plans. The same principles of fecundity produce

each kind of animals; and the same modes of preservation continue, as at the moment when by thy creative voice they were first called into existence. The parents and the most distant offspring of animals are the same: preserving invariably through their successive generations the most exact resemblance of their original stock. The different kinds still continue unaltered in proportions, features, and strength, and they flourish in full youth, bloom, and vigour; and these are qualities not interrupted by the decay, or weakened by the old age of their species. Thou hast diversified the earth with hills and valleys, woods and plains, intersected it with rivers, lakes, and seas, affording to the eye of man the most enchanting prospects, and the most beneficial means to supply the wants of his nature, and guard him against the inclemency of the seasons. Thou hast clothed the surface of the earth with the refreshing verdure of grass, and the thick forests of stately trees; thou hast enriched it with such abundant vegetables, as are more immediately conducive to the sustenance of man; thou hast stored its bowels with those metals, which excite his industry, and minister to his accommodation. Foreseeing the adaptation and subordinate utility of various materials to the comfort of human life, thou hast provided them in abundance; thy bounty to all thy creatures is like the mighty ocean, flowing in perennial streams for every age: it is open to every eye, its treasures are enjoyed wherever they are sought, but its sources are unknown and unfathomable.

Our natural desire of acquiring knowledge is ever attended with a consciousness of our ignorance; and our pride is repressed at every step we take, by the limited nature of our faculties, and the tardy progress

of our utmost diligence. The history of nature indeed, as far as our imperfect researches can extend to her general economy and laws, is the history of thy munificence to all created beings: as we enlarge our acquaintance with it, the more do we understand our peculiar obligations, as creatures endued with reason, and enlightened by the revelation of thy will. Our knowledge, therefore, is only valuable as it leads to devotion, gratitude, and obedience, which constitute the due homage of wise and dependent beings.*

By looking back through the long series of past ages, we ascend to the development of thy creative power, as the primary cause of all existence; and we observe the proofs of thy omnipotence again manifested in the most tremendous manner, when at thy command the foundations of the deep were broken

* "To consider God as governor of the world is the light wherein we ordinarily behold him, that which gives us the clearest conception we can entertain of him, which best answers all useful purposes, and has this peculiar advantage, that it represents his *goodness*, the attribute we are most interested with, in the fairest colours, as attentive to produce all the happiness possible for his creatures in the nature and constitution of things. This, when well inculcated, satisfies the minds of the vulgar, and would satisfy those of the speculative too, if they would abstain from idle questions concerning creation, and forbear to ask why things are not otherwise constituted, so that more happiness might have been produced than is now possible. For if we survey so much of nature as lies within the reach of our observation and reason, we shall find there is a balance of good sufficient to content any reasonable person."

Search's Light of Nature, vol. ii, p. 274.

up, and the guilty race of men, except thy chosen servants, were overwhelmed in the general deluge; of which the monuments are spread over the whole globe, to perpetuate the remembrance of disobedience to thy commands. By looking around us, and surveying the wide prospects of nature, we see thee supreme in majesty, love, and mercy. Led by the light of science to survey the starry heavens, we behold thee exercising these thy attributes in other worlds; and communicating the blessings of existence and providential care to other systems of creation.

Thus extending its eager views to the contemplation of objects so vast, so various, and so magnificent, our souls feel the narrowness of their faculties to comprehend thy operations, and are overwhelmed in the contemplation of thy infinite power and transcendent glory; which only the bright orders of celestial beings —the angels and archangels, who encompass thy eternal throne, can adequately conceive, or duly celebrate.

The pleasures which arise from tracing thy power and goodness will doubtless become incomparably more exalted, refined, and exquisite, when the faithful followers of thy beloved Son, our adorable Redeemer, shall be admitted to the realms of heaven and glory, and our souls disengaged from all earthly impediments, shall ascend above the stars, and resemble those immortal hosts of angelic beings;—when the most accurate, most enlarged, and most interesting knowledge will form a part of our eternal happiness;—when the restless mind of man shall no longer form wild and inconsistent theories to account for the formation of the globe; *but the volume of universal nature*

shall be unfolded to his astonished eyes;—when the laws which regulate all orders of created beings shall be fully developed and clearly comprehended, and man shall learn the true constitution of the world he now inhabits, from the time when discordant matter first obeyed thy Almighty word, and was called into harmony and order, to the last awful period of its existence!

CLASS THE FIFTH.

POLITE LITERATURE AND ARTS.

CHAPTER I.

TASTE.

THE abuse of words is a very frequent and just subject of complaint among those, who endeavour to communicate knowledge, and rectify misconception. There are some, which are used in a manner so extremely vague and fluctuating, as not to convey any precise or exact meaning. This remark cannot be applied to any word with more propriety than to TASTE: for as it passes current in common language, if its meaning can be at all fixed to any definite idea, it denotes no more than singularity, or fastidious refinement; and is often employed to express any predilection for objects, which the most capricious mind can form, without the least reference to their utility, ornament, or beauty.

In order therefore to give an exact idea of a word, which must necessarily occur very frequently in the course of this and the following chapter, it is necessary to premise, that by taste is intended to be understood

the power which the mind possesses, of relishing the beauties found in the works of nature and art.

> "Say what is Taste, but the internal powers,
> Active and strong, and feelingly alive
> To each fine impulse? a discerning sense
> Of decent and sublime, with quick disgust
> From things deform'd."—Akenside.

As we consider taste as a general principle, natural to every mind which possesses the faculties of judgment and sensibility in a competent degree, we cannot suppose that it is confined to the polished part of mankind. On the contrary, it is as common to a rude state of society, as it is to an early period of life. The wild tribes, who inhabit the interior parts of America, contemplate their extensive lakes with astonishment, and gaze upon the starry heavens with delight. There is a majesty and a vastness in these objects of nature, which affect the soul through the medium of the eye, and impress it with great ideas. The same savages decorate themselves with shells and feathers of various colours, compose songs of love and war in rude numbers, and adapt them to the animating sounds of different instruments of musick. With similar indications of pleasure children discover a fondness for the beauties of nature, and for all kinds of imitation; the most imperfect drawings and figures of animals, bright colours, and every species of novelty give them great delight; and they listen with admiration to the singing of birds, or the murmur of a cascade. So extensive are the general perceptions of beauty, harmony, and imitation, that they seem as natural to the human mind, as the universal principles of justice and truth.

But although education is not essential to the existence of taste, it is absolutely necessary in order to bring it to maturity. This plant, which grows in many soils, must be reared with care, to be brought to perfection in any. Its progress towards refinement is exactly in proportion to the activity of the mind, the extent of its observations, and the improvement of general knowledge. In phlegmatic persons it is languid and inactive, and is rather a passive acquiescence in the discoveries of others, than an original perception of their own. From a constitutional indifference, or a dullness of organs, they are slow in deciding upon the beauty of any object presented to them; and when they finally decide, they often express themselves in vague and unappropriate language, which conveys only some confused notions of satisfaction. They pronounce the same opinion of objects the most dissimilar; they say equally of a minature picture and St. Paul's Cathedral, that they are "charming, or very fine;" and thus conceal the indistinctness of their ideas, or their want of sensibility, under the convenient disguise of indiscriminate and general terms.

A refined taste depends upon sensibility for its acuteness, and upon judgment for its correctness. Sensibility may be compared to the quickness of the eye, which extends its rapid glance to the largest objects, and yet can discern even the most minute. It renders the mind alive to all the impressions made by external objects, as it is powerfully affected by every surrounding scene. This amiable quality is the source of the benevolent affections, and animates the soul with pity, love, friendship, and benevolence. As any of these virtues may degenerate into weakness, from an excess of sensibility, so likewise the decisions on the works of art

may be fantastic and frivolous, unless they are regulated by cool and deliberate judgment. These principles of true taste stand in need of mutual aid, since the determinations of the judgment are cold and lifeless by themselves, and each effort of sensibility is liable to degenerate into a blind impulse, if not attended by the approbation of the judgment. If the precision of Aristotle had been enlivened by such warm feelings as those of Longinus, his celebrated Treatise on Poetry would have possessed more attractions; and if Longinus had restrained the flights of his fancy with the logical precision of the Stagyrite, he would have defined the various beauties of composition with more accuracy, and left a more perfect work.

A relish for those obvious beauties, which strike the senses, depends upon a greater or less degree of sensibility; but in order to form a just and correct opinion of a work of genius, so many circumstances must be brought under consideration, so many qualities and relations of objects ought to be remarked, discriminated, and compared; and the design of the writer or artist ought to be so well ascertained, and such an enlarged observation both of nature and art are absolutely requisite, that no one who is not possessed of sound judgment and enlarged experience, is qualified to pass a publick and authoritative opinion.

And as judgment refines and matures the principle of taste, it follows from the gradual improvement of that faculty of the mind, that taste is capable of very high improvement. A child is pleased with the most incorrect imitations of the human figure: as he grows older he derives greater pleasure from more perfect resemblances; he looks with indifference or contempt upon what he at first admired, and smiles at his own

simplicity for having ever thought it worth his attention. The principle of taste is the same in his ripe as in his early years; it is only corrected by more accurate comparisons, and matured by more enlarged observation. In the course of his remarks he not only learns to value the finest productions of art, in preference to such as are less perfect; but by being conversant with them he gradually acquires a more delicate perception of beauty. He who has been unaccustomed to music, when he first hears a sublime chorus of Handel, however he may be gratified by the general effect of the concert, is not immediately sensible of the charms of the composition, and the masterly adaptation of the several parts to each other. He does not distinguish their close connexion, relation, and contrast. He who surveys a picture by Raphael may be struck by the brilliancy of his colours, and the majesty of his figures; but it is only by repeated inspection, that he becomes well acquainted with the unaffected grace and noble simplicity of his designs. The boy in reading Homer is amused by the variety of incidents, and warmed by the animated descriptions of his battles. Repeated perusals however can alone inspire him with a relish for the harmony of the versification, the accuracy of the descriptions, and the admirable variety of the characters. Thus by the force of habit and reflection the man of taste is formed: even his faculties of seeing and hearing become more acute by exercise; and he gradually acquires a true relish for all the particular and latent beauties of which in early life he had no adequate conception.

The advance of national taste is similar to the progress of taste from childhood to manhood. When the attention of an unpolished people is first directed

to works of art, they are captivated by mere novelty; and the rudest paintings and most unpolished verses obtain their applause. In proportion as superior efforts of genius are made, the opinion of the judicious part of the public, at least, becomes more correct; and what at first delighted is finally rejected with disapprobation. As soon as comparisons are made between different productions of the same kind, true taste is brought into action, its decisions are called for, and the justness of its discriminations is universally acknowledged. The polished contemporaries of Horace blushed at the praises, which their ancestors had bestowed upon the rude dialogues of Plautus, and were charmed with the polite and elegant comedies of Terence. The taste of refined persons of the present age is more favourable to the delicate humour of Addison, and the pointed satire of Swift, than the broad burlesque of Rabelais, or the indecent scenes of Beaumont and Fletcher. By our ancestors, romances which contained the marvellous adventures of wandering knights, distressed damsels, and formidable giants, intermixed with exaggerated sentiment and inflated passion, cold description and intricate incident, were read with eagerness. As however the improving good sense of the nation began to dislike works that were the offspring of mere fiction, many of the more modern writers have shown their abilities in the composition of novels, which please in proportion as they embellish the scenes of nature with lively colours, introduce probable, yet uncommon incidents, describe the passions with warmth, and paint such characters, as, without deviating too far from real life, strike by their novelty and spirit. From the happy mixture of these ingredients, combined in various proportions,

has resulted the popularity of Robinson Crusoe, Roderick Random, Tom Jones, and the Vicar of Wakefield.

Hence it appears, that, as often as mankind have a fair opportunity of making proper comparisons, true taste always triumphs over false. Good models quickly attract judicious admirers; the offspring of caprice and licentious imagination sinks gradually into neglect and oblivion; and succeeding ages, profiting by the errors and miscarriage of the past, and persevering in repeated trials, make more rapid and close approaches to the regions of nature and truth.

This refinement in national taste is not more observable at one period of time, than degeneracy is at another. After the great standards of literature had been erected by the writers of the Augustan age, the taste of the Romans in succeeding times was vitiated by affectation and a rage for novelty. The copiousness of Cicero, the correctness of Virgil, and the perspicuity of Cæsar gave way to the elaborate neatness of Pliny, the lofty but sometimes puerile flights of Lucan, and the affected sententiousness of Seneca. The same degeneracy was visible in all the arts. The elegant sculpture which adorned the column of Trajan was succeeded by the basso relievo of a ruder kind, which surrounds the column of Constantine; and the pictures, lately discovered among the ruins of Herculaneum and Pompeii, prove that the art of painting was on the decline about the same period. Succeeding ages sunk much lower in the scale of imitative excellence; or, in other words, contributed to bring back the savage state of mankind, since the Goths and Vandals, barbarous conquerors of Rome, waged war against the arts, as well as the persons of their foes. In one of the darkest ages of Gothic ig-

norance the works of Cicero, Tacitus, and Livy were publicly committed to the flames in almost every part of Christendom, by order of a bigotted pope; and considering that such persecution was carried on against literature, we cannot be surprised that at the same time a childish play of words was regarded as exquisite wit, and the wildest rhapsodies, destitute of the smallest intermixture of genius, were applauded as correct compositions.

But even when the arts have obtained a high degree of perfection, the common people never reach any refinement of taste, except in those remarkable cases, when a peculiar art coincides with their natural temper, and has been long cultivated and admired. The Athenians could decide with accuracy upon the merits of Demosthenes as a public speaker; and in the present age the Italians are celebrated as excellent judges of music. In most countries, novelty in every form of extravagance, broad humour, and caricature paintings and drawings afford the greatest delight to the populace. This preference is congenial with their general love of coarse pleasures, and distinguishes the multitude from the more polite classes of every nation. The inferior orders of society are therefore disqualified from deciding upon the merits of the fine arts; and the department of taste is consequently confined to persons enlightened by education, and conversant with the world, whose views of nature, art, and mankind, are enlarged by an extensive range of observation, and elevated far above gross ignorance and vulgar prejudice.

Still, however, persons of cultivated taste must be sensible, that there are limits, to which the improvement of taste ought to be confined, if they wish to

enjoy the largest share of pleasure that it is capable of affording.

> Right ever reigns its stated bounds between,
> And taste, like morals, loves the golden mean.
> Mason's Fresnoy, l. 98.

Is it not possible that our decisions may become too fastidious, and that our judgment may be occupied only in discerning trivial faults, and thus may divert the attention from those great and distinguishing beauties, which called forth all the soul of the writer or artist? This disposition of mind is like an extreme irritability of temper, or a weak texture of nerves, which is liable to be disordered by the slightest accidents, and which so far from being proofs of sound health, are rather symptoms of infirmity and disease. The feelings of that connoisseur are not to be envied, who turns from the majestick forms and glowing colours of Rubens, as displayed in the marriage of Mary de Medicis, to censure the introduction of flying cupids and other allegorical figures; nor can he be denied to sacrifice his pleasure to petty discernment, who prides himself upon discovering that in the spirited equestrian figures of Charles at Charing Cross, and of Louis XVI. which formerly adorned the Place de Vendome at Paris, girths are wanted to the saddles; that the fingers of the Venus de Medicis are without joints, and that some reverses of the exquisite Greek medals of the Syrian and Egyptian kings are of rude execution. Such nicety of observation is by no means desirable; as, instead of enlarging the circle of mental pleasures, which is the great excellence of taste, it contributes to contract them, and makes a person severe in his

censure of defects, which he ought to excuse for the sake of the beauties to which they are allied.

"There is more true taste in drawing forth one latent beauty, than in observing a hundred obvious imperfections; the first proves that our spirit co-operates with that of the artist; the second shows nothing more, than that we have eyes, and that we use them to very little purpose" Webb on painting, p. 13.

The man of taste extends his observations to the appearances of nature, as well as the productions of art. He discovers beauties wherever they are to be found in the works of God and of man, and is charmed with the harmony and order of the different parts of the creation, and with the endless variety of new objects, which nature presents to his view. The flowers as they disclose their vivid hues, the animals that move in comely symmetry, the ocean that now spreads its smooth surface, and now heaves its tempestuous waves on high, the mountains that swell in rugged majesty, the valleys clothed in verdant attire, the splendid luminary whose beams disclose the beauties of the world, and who decks the face of nature with brighter charms, the blue concave of heaven spangled with countless stars, and illumined by the soft effulgence of the moon—all these come under the observation of taste, and supply it with abundant sources of enjoyment.

Taste presides with supreme authority over all the elegant arts. There are none so low in their subserviency to the uses of mankind, as not to afford subjects for its decisions. It extends its influence to dress, furniture, and equipage; but presides, as in its most distinguished and eminent provinces, over

poetry, eloquence, painting, architecture, sculpture, and music; because among them genius takes its unbounded range, and exerts its fullest power.

By GENIUS is generally meant a disposition of nature which qualifies any one for a peculiar employment in life: but in its highest sense, considered with reference to the fine arts, it may be described to be that faculty of the mind which unites *the greatest quickness of sensibility, and fervour of imagination, to an extraordinary ease in associating the most remote ideas in the most striking manner.** However bold and adventurous the man of genius may be in his flights of fancy, he seldom soars without the guidance of judgment; for judgment will not often be found to desert the art, which is its peculiar and favourite subject. He delights to strike out a new and original track, and performs without effort, under the powerful influence of that enthusiasm, which gives spirit to all his works, what was never before attempted or executed. He disdains not the aid of other minds, but studies their productions with care; and while he is cautious not to contract a bigotted attachment to any particular predecessor, he enlarges the circle of his ideas with the perfections that are dispersed among many artists or writers, and appropriates them to his own use, by giving them superior energy, elegance, and splendour. He thus aspires to excellence peculiar to himself, by giving grace to the little, and dignity to the mean; by diffusing an air of novelty around the most familiar objects; by painting nature in every

* Dryden's Letter to Howard, vol. i, p. 47. Akenside's Pleasures of the Imagination, book i. Webb on Painting, Poetry, and Music, p. 151. Du Bos, tom. ii, p. 14. Reynolds, p. 203, 212, 213, 237, 266.

pleasing form, attitude and colour; and by expressing at will the powerful emotions of the passions. In the wide circle of art and nature he assumes whatever form he chooses, and in every form delights by novelty, captivates by beauty, or astonishes by sublimity. Every art is a vehicle of genius, whether it strikes the mind with admiration in the attractive loveliness of the Venus de Medicis, in the sublimity of a chorus of Handel, or in the divine Madonna of Raphael. Literary productions present it to us in the Battles of Homer, the Odes of Pindar, Dryden, and Gray, and the tragedies of Sophocles and Shakspeare. The man of genius cannot possibly from the natural imperfection of mortals, be always equal, and sublime. Like the eagle, he does not pursue his course at the same height to which he occasionally rises; but still, if ever he descends, the same original character and the same majesty are visible, as he walks upon earth, which distinguish him when soaring to the skies.

As this rare and wonderful faculty of genius is free and unrestrained in the exercise of its powers, and the extent of its operations, so is it likewise unconfined in its origin. It is the offspring of no particular country or age, although some particular places and times are more prolific in its productions than others. In the early periods of Grecian history the sun of genius shone forth with full splendour in Homer, Æschylus, Sophocles, Euripides, Pindar, Theocritus, Plato, Demosthenes, Praxiteles, Phidias, and Apelles. When Rome attempted to emulate Greece in the cultivation of arts and literature, it fired the bosoms of Lucretius, Virgil, Horace, Tibullus, Livy, and Cicero. After a long night of mental darkness, it rose again in Dante, Ariosto, Tasso, and Raphael; and finally penetrated

the Island of Great Britain, to illuminate Shakspeare, Milton, Dryden, and Thomson.

Genius never displays its peculiar power so much as by taking its flight from the incidents of its own experience, and ascending to the heights of invention. The painter and the poet look around upon all the works of nature, compare her various forms with each other, mark their defects and excellencies with a penetrating eye, and from this wide survey acquire a just idea of beauty. Thus from the select charms of various nymphs did Zeuxis compose the inimitable figure of his Helen; and thus did Cicero, who relates the anecdote with peculiar elegance of description, model his own flowing style, and frame his luminous composition, by studying the copiousness of Plato, the energy of Demosthenes, and the sweetness of Isocrates. Cicero de Inventione, lib. ii. Quint. lib. x, c. 1. By words or by colours the man of genius expresses an exact resemblance of the archetype, which fills and sublimes his fancy. Not that by such a refinement he ever deserts nature, for then he would only describe the phantoms of a disordered intellect; but by confining the offspring of his invention within the limits of good sense and probability, he gives more beauty to description, more strength to passion, more grace, dignity, and perfection to character, than are usually to be met with in real life. The chief merit of this representation of ideal excellence consists in marking an object with such peculiar features, as are eminently just, natural, and attracting, at the same time that the pleasure derived from these circumstances is increased by a happy effort to exalt the dignity of man, and refine the charms of nature. The prolific powers of the mind occupied continually in combining

remote images, in selecting the choicest circumstances, and in contrasting opposite passions and effects, produced the landscapes of Claude Lorraine, the cartoons of Raphael, and the characters and actions of the Iliad.

If genius, which is the soul and the animating principle of invention, both in literature and the fine arts, be wanted, no other excellence of an inferior kind can compensate its absence. An heroick poem, or a tragedy, may be written with the most exact attention to the rules of criticism, the versification may be polished and harmonious, it may be replete with fine morality, and enlivened by brilliant imagery: yet still a work may have few charms to fix the attention of a judicious reader. Tired of the insipidity and tameness of a narrative in verse, he quits the Henriade of Voltaire for the Iliad of Homer; and after having confined his reluctant eye to the cold sentiments of Cato, and the lofty diction of Irene, he flies with redoubled pleasure to the eventful scenes and fervid passions delineated in Macbeth and Othello.

Hence it appears, that to strike the mind with force and surprise, to impress upon every one its own vivid and glowing sensations, to set all objects strongly and perfectly before the fancy, and to produce a kind of *dramatic* effect, as if persons were acting, and objects were presented before our eyes, are the certain effects of genius. Homer, the great father of epic poetry, moves us by a kind of enchantment, and seizes the mind by the irresistable magic of his art. He resembles his own Demodocus*, the blind and venerable bard of Phæacia, who by his animating song and pow-

* Homeri Odyss. lib. viii, l. 62, &c. lib. xiii, l. 28, &c. Othello, act i, scene 3.

erful harmony rouses the passions at will, and fires the soul with alternate joy and grief. Shakspeare, the immortal dramatist of the British stage, is like his own Othello, when conversing with Desdemona, as he excites the strongest interest in those who listen to his descriptions, and gives even to repetition the potent charms of love and delight. The memory grasps with a strong and lasting hold the works of such a genius. What is once read is rarely forgotten; and what has been once enjoyed by the reader is always recollected, without any diminution of the first pleasure. Who can peruse without emotion, or call to mind without feeling the mingled sensations of pleasure and surprise which he originally felt, the parting interview of Hector and Andromache in the Iliad, the conversation of Macbeth with his wife after the murder of Duncan, and the wild and terrific denunciations of the Bard of Gray?

The fondness, which superficial observers express, for new and extraordinary objects, usually fluctuates in uncertainty, and is frequently founded on caprice: but true taste is ever regulated by a fixed standard.* This standard is supported by the impartial sentiments of the judicious and the enlightened; and the authority of such decisions depends not upon the consent of persons of any country in particular, when national prejudices or local habits pervert the judgment. It is not founded upon the partiality of a few admirers, who raise an author to temporary distinction; but it is an union of just conclusions, de-

* Reynolds's Discourses, p. 295. Elements of Criticism vol. ii, p. 497. Du Bos, tom. ii, p. 336. Polite Literature, vol. ii, p. 30.

duced from sound principles of reason. It is derived from the concurrent voices of men of various ages and nations, possessed of enlarged and cultivated understandings, who have surveyed the works of genius with close attention, and have recorded in animated descriptions the impressions made upon their minds. This authority has stamped its approbation upon works which have obtained the general applause of all ages and countries, and must still continue to produce a similar effect, so long as the intellectual powers of man remain the same ;—so long as his imagination and his heart are capable of being affected by all that is beautiful, pathetick, and sublime.

The publick opinion seldom fixes the stamp of permanent approbation upon works of genius before a considerable time has elapsed. Fame is a plant that comes late to maturity ; and it never flourishes more vigorously, takes deeper root, or puts forth more luxuriant branches, than after it has been checked in its early growth. Those works, which are highly commended as soon as they are published, rarely maintain their reputation through succeeding ages, because their claim to distinction is built upon limited views of nature, the fashions, the follies, or the vices of the times. Their attractions cease as soon as the originals from which they are taken are impaired or destroyed by age. The Hudibras of Butler shares the fate of all occasional satire, and is now more praised than read. The poems of Churchill, and the life of Tristram Shandy, have gradually declined in popularity, since the death of their respective authors. What degree of applause have the Probationary Odes, or the scurrilous productions of Peter Pindar, to expect from the dispassionate and cool judgment of a distant age ?

Early fame is seldom the harbinger of future glory. While the publick opinion is depressed too low by the envy of rivals and detractors, or raised too high by the flattery of injudicious friends, no fair decision can be expected. Time alone can overcome these obstructions and cause the agitation and the conflict of prejudice and partiality to subside. A considerable period may indeed elapse before an equitable posterity will make amends for the injustice of their forefathers; but in the mean time this soothing consolation may cheer the drooping spirits of neglected genius—that a few years will put an end to the attacks of slander and envy; that though his works may outlive the partiality of friends, they will triumph over the malignity of enemies; that they will pass like gold from the furnace pure and unhurt, through variations of taste and changes of manners; and that the longer they remain, the brighter will be their fame, and the more durable their honour. The final decision of mankind is seldom if ever wrong, because it results from the upright motives and unprejudiced examination of those who have no interest in traducing merit, or in depriving it of reward. The animosity of party spirit for a long time obstructed the reputation of the Paradise Lost; and the productions of Shakspeare and of Racine obtained their just estimation, not from their contemporaries, but from the generations that succeeded them*.

* "On the whole it seems to me, said Sir Joshua Reynolds, with his usual justness of observation, that there is but one presiding principle which regulates and gives stability to every art. The works, whether of poets, painters, moralists, or historians, which are built upon general nature, live forever; while those which depend for their ex-

Authority lends its assistance to regulate private judgment; but its dictates are not so rigorous, nor its decisions so arbitrary, as to exclude the privilege which every one may rightly claim, of judging for himself. It is not because Aristotle, Horace, and Quintilian have laid down the rules of criticism, that we must implicitly bow to their authority. It is because their rules are derived from the works which they criticize,—works which have been distinguished by the admiration of the most improved part of mankind, from their first appearance to the present times. It is therefore with good reason Longinus has made the concurrent applause of persons of different ages, various characters and languages, a criterion of the true sublime. The sensible part of mankind, as we have before remarked, possess in common the principles of taste, to which every production of literature and the arts may be referred. But it may abate the vanity of those who judge with precipitation, to recollect how often their final determinations have differed from their first opinions. From an impatience of control, a pride of singularity, and a rage for novelty, we may revolt against the established decrees of the republic of letters, and the schools of the arts: but mature reflection upon the grounds on which these decrees were pronounced, more complete and more distinct views of nature, and our own more enlarged

istence upon particular customs and habits, a partial view of nature, or the fluctuation of fashion can only be coeval with that which first raised them from obscurity. Present time and future may be considered as rivals; and he who solicits the one, must expect to be discountenanced by the other."

Discourses, p. 146.

experience, will induce us to allow their propriety, and acknowledge their justice. We may think indeed that the chain of prescription is apt to bind us too closely; but, if we proceed upon right principles, we shall at length come to the exact point, from which we were eager to recede. We shall abandon the pride of singularity as puerile and weak, and be happy to enlist under the standard of the sagacious part of mankind. "The addition of other men's judgment is so far from weakening, as is the opinion of many, our own, that it will fashion and consolidate those ideas of excellence, which lay in their birth feeble, ill-shaped, and confused; but which are finished and put in order by the authority and practice of those, whose works may be said to have been consecrated by having stood the test of ages." Reynolds's Discourses.

The tales of Ovid delight the imagination of boys, at a time when they peruse many passages of Virgil with indifference: in riper years they gradually experience an alteration of opinion, and applaud the correctness and delicacy of the one, in proportion as they disapprove the improbable fictions and puerile descriptions of the other. The glowing and gorgeous tints of the Florence school please the eye at the first view; but it requires time and comparison to relish the simple majesty and sublime forms of the Roman artists.

Of a pure and correct taste, the genuine offspring is candid and enlightened criticism. A good critic answers to the character which pope has so finely drawn of Longinus. He is

> "An ardent judge, who, faithful to his trust,
> With warmth gives sentence, and is always just."

It is his province to determine the general laws of the arts, to assign their beauties to particular classes, and to explain the reasons of their affecting the mind with pleasure. He observes irregularities with a penetrating eye, and discovers that precise character of excellence or defect, by which every work is respectively marked.

Although such is the proper description of a critic, we may venture to pronounce, that all who are commonly known by that name have not an equal claim to our approbation. *Scaliger*, the enthusiastic admirer of Virgil, endeavoured to raise the fame of that elegant poet by depreciating Homer; and the deep and various learning displayed in his critical works is but a slight palliation for the weakness of his arguments, and the violence of his prejudices. *Hurd*, the ingenious annotator on Horace, is deservedly esteemed as an eminent scholar, and a correct writer: but surely in his critical productions he discovers much cold precision of remark, and much fondness for systematic trifling. *Warburton*, considered as a commentator on Shakspeare, showed a great degree of ingenuity; but it was too often exerted without judgment and without taste. He only saw in his author what he predetermined to see, and thus frequently sacrificed the sense of Shakspeare to the caprices of his own fancy. He amuses his readers by his specious arguments, more than he instructs them by his explanation of obscure passages. Comprehensive as was the mind of *Johnson*, his judgment was often perverted by prejudice; and in his Lives of the English Poets, much as they abound with solid observations, and just principles of criticism, he had too little relish for works of pure imagination, and was too sparing in his concessions to the muses of

Milton and of Gray. If we wish to be directed to authors, who were eminent for correctness of taste, we may select in painting *Fresnoy*, *Vasari*, and *Reynolds*; in music, *Burney*; in eloquence, *Cicero* and *Quintilian*; and in poetry, *Horace*, *Pope*, *Gray* and the *Wartons*. These were critics, who had the singular merit of teaching that art in which they were themselves distinguished? and their own works are an example and an illustration of their rules. They knew the difficulty that attends every attempt to reach the summit of excellence; and therefore, in the distribution of their censure and their praise, they were considerate, generous, and candid. Their various knowledge, extensive experience, and refined judgment, qualified them for their important office as arbiters of merit; and they deserve the earnest attention of the public, when they preside at the tribunal of taste, and pass sentence upon the works of literature and the arts.

CHAPTER II.

THE SUBJECT CONTINUED.

MUSIC and *poetry* considered as conveying a very high degree of pleasure to the ear and the imagination, engage the immediate notice of the critic: *painting*, which is an equal source of gratification to the eye, as properly belongs to the province of the connoisseur, as music.

I. MUSIC.

"*What kinds of musical tones are most grateful to the ear?* Such as are produced by the vocal organ. And next to singing *what kinds of sound are most pleasing?* Those which approach the nearest to vocal. Which are they? Such as can be sustained, swelled, and diminished at pleasure. Of these the first in rank are the violin, flute, and Hautbois. *But what instrument is capable of the greatest effects?* The organ; which can not only imitate a number of other intruments, but is so comprehensive, as to possess the power of a numerous orchestra. But has it no imperfections? Yes, it wants expression, and a more perfect intonation. What kind of music is most pleasing to mankind? To *practised ears*, such as has the merit of novelty, added to refinement and ingenious contriv-

ance; to the *ignorant*, such as is most familiar and common." Burney's History of Music. Preface.

Music is an object of universal love, and from its prevalence in every age, and by its cultivation in every part of the world, it seems as if there was something in the "concord of sweet sounds" congenial with the mind of man. Among rude and unpolished nations it has ever risen to peculiar importance, and been introduced to aid the expression of joy and grief, upon all solemn and festive occasions. It has ever been the solace and the delight of men of genius, and there is no subject which is praised in more ardent expressions, or expatiated upon with more delight, by Homer, Tasso, Milton, and Shakspeare. It cheers the traveller as he pursues the journey of life, and produces an innocent and sweet oblivion of his toil.

For a description of the powers of music, recourse can best be had to the sister art, to which sound is so frequently indebted for the most pleasing alliance of sense: and perhaps it will not be found easy to produce a short description of its application to the various situations of life, and different feelings of the heart, more beautiful and just, than the following verses—

Queen of every moving measure,
Sweetest source of purest pleasure,
Music! why thy powers employ
Only for the sons of joy?
Only for the smiling guests
At natal or at nuptial feasts?
Rather thy lenient numbers pour
On those whom secret griefs devour:
Bid be still the throbbing hearts
Of those whom death or absence parts;

And with some softly-whispered air
Smooth the brow of dumb despair.*

As the notes used to express any sensations may be equally in unison with those of a similar nature, music requires the aid of language to characterize any individual passion. If correspondent words are the associates of sound, they become by this alliance specific indications of the manners and passions; and the pleasure conveyed to the ear is attended by the more refined gratification of the understanding. Mysterious as the mode of the operation of sound may be, it is clear that nature has connected certain emotions with them, and their effect is sufficiently ascertained and deeply felt; for they are the keys which unlock all the passions of the soul. Sounds variously modified, and judiciously combined with words, can melt with pity, sink in sorrow, transport with joy, rouse to courage, and elevate with devotion. They have a peculiar effect in cherishing the tender passions, and calling up the long forgotten images of the past, with all their attendant train of associated ideas. While the ear is delighted with the strains of harmony, the fancy is busied in the contemplation of the most affecting images, and the whole soul is exalted to the bright regions of joy and happiness.

The order of sounds in simple melody resembles in their principles that proportion of parts, which constitutes the symmetry of the human form. Our hearing and sight, the noblest of our senses, are indulged by the arts with their proper gratifications. As painting

* See the Medea of Euripides, l. 192, &c. from whic Dr. Joseph Warton took these ideas.

and sculpture produce the means of enjoyment to the eye, so music supplies entertainment to the ear. Of all compositions none are more truly affecting than those which were anciently adapted to the popular ballads of particular countries, such as Switzerland and Scotland.

> They come o'er the ear, like the sweet south
> That breathes upon a bank of violets,
> Stealing and giving odour——

They show in the greatest degree the power of the association of ideas. They can awaken the lively emotions of tenderness and melancholy pleasure in every susceptible mind: but their effect is felt in the highest degree by the natives of those countries, when far distant from home. The instant the sounds of the *Rans dë Vaches* strike the delighted ears of the Swiss in a foreign country, his memory and fancy are busied in recalling the charms of the fair nymph who was the object of his early affection; and they revive the images of the lofty Alps, the rapid torrents, the wild woods, the paternal cottage, and all the scenes and occupations of his youth. His soul is melted with tenderness inexpressible, and his passion to return home produces a deep despondency, which nothing but the enjoyment of these beloved objects can effectually remove.*

Nor is the mind less pleasingly affected by the power of sacred music when the various excellence

* The bands belonging to the Swiss regiments in the French service were prohibited from playing this tune to the Swiss, as it had caused many of them to desert.

of melody and harmony is united in its subjects. How grateful to a good ear are the anthems of Kent, Boyce, and Hayes, when sung by some of the best choristers; whom St. James's Chapel; Magdalen College, Oxford; and Trinity, Cambridge, can boast;—and how divine are the airs of Handel when warbled from the lips of a Mara, a Billington, and a Harrison! They disengage our minds from the vulgar objects of life, lull our passions and our cares to repose, and remind us of the pleasure enjoyed by our first parents when listening to the music of the angels in the garden of Eden.

——————— How often from the steep
Of echoing hill or thicket have we heard
Celestial voices to the midnight air,
Sole, or responsive each to others note,
Singing their great Creator? Oft in bands
While they keep watch, or nightly rounding walk,
With heavenly touch of instrumental sounds
In full harmonic number joined, their songs
Divide the night, and lift our thoughts to heaven.
Paradise Lost, book 4.

In perfect and full *harmony*, the different parts of a musical composition are so combined and justly adapted, that no discord results from their number. The various notes are so ingeniously blended, there is such an happy union of the loud and the soft tones, of stringed and of wind instruments, of vocal and instrumental power, that the ear is filled, not overwhelmed; transported, not distracted. The efficacy of the principles upon which harmony depends is so great, that they are able even of themselves, without calling in the aid of the passions, to produce considerable plea-

sure. To be sensible of this pleasure, however, depends as much upon skill as a practitioner, as upon taste as a connoisseur.

The prevailing fashion of the present times is by no means favourable to the union of the best efforts of poetry with the noblest productions of music. Handel indeed gave new charms to the lyric muse of Dryden, and Arne composed the opera of Artaxerxes in the most delightful style. But the sound and the sense, far from possessing uniform spirit, are in more recent productions, especially in several Italian operas, a heavy burthen upon the exertions of each other. The most insipid airs are not "married to immortal verse," but united to unmeaning words, and their alliance is forced and unnatural. Nothing indeed can be more tiresome or absurd than *recitative* in general. It has neither the charm of singing, nor the intelligible expression of plain speech, as it consists of an unmeaning quantity of notes brought together to the confusion of all sense. "What can be more contrary to nature than the singing a whole piece from beginning to end, as if the persons represented were ridiculously matched, and had agreed to settle in music both the most common and most important affairs of life. Is it to be imagined that a master calls his servant, or sends him on an errand singing; that one friend imparts a secret to another singing; that men deliberate in council, and that orders in the field of battle are given singing; and that men are melodiously killed with swords and darts? This is the downright way to lose the life of representation, which without doubt is preferable to that of harmony; for harmony ought to be no more than a bare attendant, and the great masters of the stage have introduced

it as pleasing, not as necessary, after they have performed all that relates to the subject and discourse. Nevertheless, our thoughts run more upon the performers than the hero in the opera, and Viganoni and Morelli are seldom out of our minds. The mind not being able to conceive a hero that sings, runs to the actor or the actress; and there is no question but that in our most fashionable operas, Banti, or Bolla are a hundred times more thought of than Zenobia, or Dido."*

In our most fashionable concerts, instrumental performance is, in many instances, carried to such a degree of vicious refinement, that one sense is gratified at the expense of another; since it is converted into an amusement for the eye, rather than a delight to the ear, or a solace to the mind. The brilliant execution of an eminent performer, displayed in some hasty and trifling symphony, quartetto, or quintetto of his own is regarded as an excellence of the first value. Salomon, Pinto, and Raimondi are recommended for habitual skill, and mechanical dexterity, and the rapidity with which they can run through passages in the smallest space of time. The audience judge of such music by the difficulty of its execution; they lavish their praise upon the principal performer, but are unmoved by the music, and their applause operates as an en-

* "These remarks of St. Evremond relate to the musical *tragedy* of the Italians. With respect to the musical *comedy* or burletta, it affords an additional proof how little music, as such, is able to support itself. In the tragic opera it borrows aid from the tumidity of the poetry; in the comic from the powers of ridicule, to which music has not the least relation." Hawkins on Music, p. 74. Preface.

couragement to new extravagance of the same kind. But amid this prevailing taste which leads to what is capricious and desultory, a judicious hearer seeks for delight in the compositions of Purcell, Jomelli, Handel, and Haydn. He prefers the steady and spirited performance of their works to the modish refinements in practice, and what are deemed the improvements in the power of execution; because he *feels* that the productions of these great composers are original and spirited, truly grand and affecting, and exert the sweetest influence of harmony over his mind.

II. PAINTING.

The art of painting gives the most direct and expressive representation of objects; so that probably for this reason it was originally employed by many nations, before the introduction of letters, to communicate their thoughts and to convey intelligence to distant places. The Egyptians pourtrayed their ideas by tracing the resemblance of plants and animals; and the Mexicans conveyed to their emperor Montezuma the information of the arrival of the Spaniards upon their coasts, by sending him a picture representative of the event. The pencil may be said to write a universal language; for every one can instantly understand the meaning of a painter, provided he be faithful to the rules of his art. His skill enables him to open the various scenes of nature at one view; and by his delineation of the striking effects of passion,

he instantaneously penetrates and agitates the soul of the spectator. The influence of the pencil indeed is so great and extensive, that its productions have constantly been the delight of all countries of the world, and of all seasons of life.* Poetry and painting are sister arts; if the latter borrow many subjects from the former, the obligation is repaid by the glowing metaphors and striking illustrations, with which painting requites poetry. The Grecian painters caught many of their finest ideas from poets and historians. The imagination of Phidias was aided in forming his Olympian Jupiter by the sublime description of Homer. The horrid story of Count Ugolino and his family, as described in the expressive strains of Dante, in his Inferno, gave a noble subject to the bas-relief of Michael Angelo, and was afterwards as affectingly represented by the masterly pencil of Reynolds. Gray, when describing the bard, says,

> "Loose his beard, and hoary hair
> Streamed, like a meteor, to the troubled air:"

He is supposed to have recollected the celebrated picture of Raphael, at Florence, representing the Supreme Being, in the vision of Ezekiel.

A good picture produces a momentary enchantment, carries us beyond ourselves, and either trans-

* Richardson, chap. i. Quintilian, lib. xii, c. 10. Reynolds, p. 101. The peculiar beauties of the great masters of the Italian schools are finely touched by Fresnoy, l. 519, &c. His poem *De Arte Graphica*, with the translation of Mason, and the notes of Reynolds, furnishes the general rules of the art, and therefore may supply the principles of criticism

ports us into the midst of the most delightful scenery, or places us by the side of saints, martyrs, and heroes. It brings before us the most eminent persons, either living or dead, charms the imagination with their ideal presence, and assists us while we contemplate their persons, and examine the expression of their features, to recal the memory of their virtues. It amuses the eye with the views of nature, however remote the original scenes may be from the spectator, and gives to the Swede or the Russian the fair portrait of Circassian beauty, or the bright and smiling objects of Italian scenery. The landscapes of Claude Lorraine delight the eye with the rich selection of palaces, extensive prospects, and glowing skies. The sea views of Vandervelde are justly admired for truth and accuracy. The portraits of Vandyke charm by lively expression of character, grace of design, and delicacy of colouring. Hogarth displays that just representation of common manners, which conveys to every spectator a moral lesson.

——————— Thy works a school,
Where strongly painted in gradations nice,
The pomp of folly, and the shame of vice
Reached through the laughing eye the mended mind,
And moral humour sportive art refined.
While fleeting manners as minutely shown,
As the clear prospect on the mirror thrown;
While truth of character exactly hit,
And drest in all the dyes of comic wit;
While these in *Fielding's* page delight supply,
So long thy pencil with his pen shall vie.

Hayley on Painting.

But of all pictures none are so interesting in the display of figures, none so powerful in effect, as the *historical*, since they represent a momentary drama. This branch of the art maintains the same superiority over all others, which tragedy has acquired over epigrams, pastorals, and satires. The effect of such pictures depends upon propriety of expression, and dignity of subject; but the tie which unites the different characters to each other, and produces a perfect whole, is the connexion of the subordinate figures with the principal one. There is great elegance of figures, and brilliancy of colouring, in the Pembroke Family, by Vandyke, at Wilton; but the picture is very deficient in the excellence of which we are speaking. Each individual of the group forms a distinct portrait, and is no otherwise connected with the rest than as they are all painted upon the same canvass. Such a defect in a point so essential to historical painting, may remind us of the assemblage of unconnected stories, which compose the Orlando Furioso of Ariosto, and the Fairy Queen of Spenser.

This beauty of composition is displayed in many celebrated pictures, such as the Tent of Darius by Le Brun, St. Paul preaching before Felix, by Raphael, the Presentation in the Temple, and the taking down Christ from the cross by Rubens; and the last Supper by Poussin.* The death of general Wolfe, and

* The characters of Michael Angelo, Raphael, Poussin, Rubens, and Vandyke are finely touched by Hayley in the following passage:

Inflamed by genius with sublimest rage,
By toil unwearied, and unchilled by age,
In the fine frenzy of exalted thought,
Gigantic *Angelo* his wonders wrought;

the Resurrection of Lazarus by West, possess similar merit.

But of this unity of design no happier instance can perhaps be adduced than the Cartoon of Raphael, representing the death of Ananias. At the first glance we become interested in the awful scene. The place is a spacious hall. The appoplectic figure prostrate on the ground, is evidently Ananias, the victim of supernatural power. The sublime and majestic St. Peter stands on a raised platform, with his arm extended in a threatening manner, as if he had just pronounced his doom. The terror occasioned by the

> And high by native strength of spirit rais'd,
> The mighty Homer of the pencil blaz'd.
> Taste, fancy, judgment, all on *Raphael* smiled;
> Of grandeur and of grace the darling child:
> Truth, passion, character, his constant aim,
> Both in the human, and the heavenly frame;
> Th' enchanting painter rules the willing heart,
> And shines, the finished Virgil of his art.
> The sage *Poussin*, with purest fancy fraught,
> Portrayed the classic scene, as learning taught.
> Proud of the praise by *Rubens'* pencil won,
> Let Flanders boast her bold inventive son!
> Whose glowing hues magnificently shine,
> With warmth congenial to his rich design:
> And him her second pride, whose milder care
> From lively beauty caught its loveliest air,
> Who truth of character with grace combined,
> And in the speaking feature marked the mind,
> Her soft *Vandyke*, while graceful portraits please,
> Shall reign the model of unrivalled ease.

[illegible]v on Painting, p. 15, 20, 22. See his excellent Notes, nolds's Discourses.

sudden stroke is expressed by the features of youth and middle age on each side the sufferer. Sapphira the accomplice and the wife of Ananias, is just approaching the fatal centre. In this composition of near thirty figures none can be pointed out as a figure of common place or mere convenience; they are linked to each other, and to the centre, by one chain. All have room to act their proper parts with reference to the main incident, and like the rays of a circle, all conduct the eye to the central point.*

The admirers of painting in this country enjoy very favourable opportunities of surveying fine specimens of their favourite art. Pictures of inestimable value have of late been brought from abroad, and our collections bid fair to rival most of the celebrated cabinets upon the continent. Since the French revolution London has become more than ever a repository of the choicest productions of the pencil. A great improvement may consequently be expected in the general taste, as an amateur has it in his power to contemplate such numerous works of the masters before mentioned, in addition to the delightful productions which display the boldness and grandeur of Michael Angelo, the wild fancy of Salvator Rosa, the brilliant colouring of Titian, the graceful forms of Guido, the chaste manner of Correggio, the elaborate accuracy and

* I am indebted for this example to Mr. Fuseli's Lectures, which are replete with "thoughts that breathe, and words that burn." Such is his learning, profound insight into the heart, and refined taste, that every reader must be highly gratified by *studying* them;—for a superficial perusal cannot do them justice.

rich tints of Rembrandt, the classic elegance of Poussin, and the spirited expression of Lodovico Carracci.

They who take a pleasure to inspect collections of paintings should endeavour to be accurate in their observations upon the works of celebrated masters, and try to discover the cause of the pleasing effects produced on their minds. A refined taste raised above the unmeaning gaze of admiration, can only be formed by studiously examining the whole of a composition, by exploring the truth, elegance and grandeur of the design, the grace of the figures, the resemblance to nature in the colouring, and the magic touch of the pencil which gives warmth and spirit to every part.

One principal requisite on which to found an accurate judgment in painting, is to be conversant with sacred and profane history; particularly the former, as many subjects of the finest pictures are taken from the bible. Another requisite is to study nature, so as to have fixed in the memory exact and beautiful images of every object that can enter into a composition, and to accustom the eye not only to what is graceful and elegant in the human form, but what is striking and natural in trees, rocks, and rivers, as well as the different appearances of light and shadow which agreeably diversify the face of nature. By examining the peculiarity of colouring, we may in many instances discover what constitutes the manner of the great masters. Every one is remarkable for some predominant tint. Black prevails in the pictures of Carlo Dolce, Caravaggio, Spagnoletto, Manfredi, and Valentino; in some a paleness, as in Vouet and Niccolo Poussin; the purple in the Bassans, and in Teniers the grey. There are other characteristic circumstances; Correggio and Titian are known by the beauty of their car-

nations, Rubens is remarkable for the grandeur of his figures, and Vandyke for the delicacy of his flesh colour, and the beauty of his hands and arms. Holbein painted his larger portraits upon a green, and his smaller upon a blue ground. There are many other peculiarities which an observer, attentive to the beauties of this delightful art, cannot fail to notice.

Portrait painting may be justly regarded as a very pleasing branch of the art, particularly as it is carried to a considerable degree of excellence by the most admired artists of the present times. It may indeed be employed to raise many monuments to vanity and ostentation, but it likewise pays such respect to affection, to friendship, and to gratitude, as cannot fail to excite the most pleasing emotions of sensibility. By the aid of the pencil is preserved the resemblance of the parent we revere, the child we love, and the hero we honour. Although separated from the objects of our regard by extensive provinces and vast oceans, their lively portraits place us still in their company, and even though they are cut off by death, and are mouldering in the tomb, their beloved forms still retain the semblance of animation, they still bloom in the expressive colours of the ingenious artist, and their features excite the recollection of their dispositions, manners, and characters.

While, therefore, it is our wish to inculcate the principles of true taste by recommending an attention to the works of the old masters; it is by no means intended to depreciate the works, or discourage the exertions of the painters of our own age and country. It may indeed be apprehended, that as they confine themselves so much to portrait painting, and are so much engaged in copying individual nature, and the

subjects taken from common life, they cannot reach the highest degree of their profession, and excel in historical painting. But it ought to be considered, that as they are obliged to follow the current of the fashion, they have rarely an opportunity of putting their abilities to a full and fair trial. For what they *can* effect we may appeal to several excellent pictures which adorn Windsor palace, the Shakespeare, the Milton, and the Macklin galleries, as well as several private collections. If there be instances in which they have failed in their efforts to embody with adequate force and spirit, the conceptions of a Shakespeare and a Milton, we must consider how impossible it is to express by colours the efforts of the imagination, and to bring into one point of time the successive particulars of description. A failure in this respect is rather the defect of the art, than of the artist.

Instead of lavishing immense sums upon the continent in the purchase of more pictures by the old masters, would it not be more honourable to the national character, to foster the genius of our own painters, and give a new incitement to their exertions. These purposes might be effected, if the noble and the opulent would follow the example of the illustrious founder of the royal academy, and patronize eminent artists. The field for their exertions is extensive and fruitful, and they possess one decided advantage over the great masters; as they are not confined by the superstitious fashion of the age to one particular description of subjects. Subjects indeed are so far from being wanted, that it is rather a difficult task to select, than to discover them. The choice might rest with the artists themselves, who are the best judges of their own powers of execution. The history of our

own country considered not merely with a view to war, but the arts of peace presents a wide range of topics. Let the public patronise the execution of a series of pictures to form a national gallery, let each eminent painter be well remunerated for the picture he undertakes, and a fair experiment might be made to convince the world whether British genius, fostered by British liberality, was not capable of producing such works of art, as would confer distinguished honour upon our age and country.

III. POETRY.

As eloquence differs from common narrative, by the use of figurative and metaphorical expressions, and a greater conspicuousness of style; so poetry is distinguished from oratory by words and expressions still more vivid and more ardent.* And what more strongly marks the line of separation between poetry and eloquence, is the ornament of verse. This gives to it a specific character, and adorns it with peculiar graces; and it is this, which, by the harmony and variety of numbers adapted to every subject, affords so much delight to the ear. To the different kinds of poetry custom has assigned various kinds of metre; to the epic is appropriated heroic, and to the ode unequal verse; and this custom is so firmly established, that

* The characteristic distinctions of poetry, eloquence, and history, are touched with his usual spirit, judgment, and taste, by Quintilian, lib. x, c. 1, sect. 3. lib. xii, c. 10, sect. 4. Reynolds's Discourses.

any violation of it would offend the public taste, and raise such strong prejudices against a writer, as an exalted genius only could overcome. The Fairy Queen of Spenser maintains its ground among the first poems in our language, although written in the Italian stanza: but who ever reads the heroic poem of Gondibert, written by Davenant in elegiac verse?

Assisted by the observations which we have made in different parts of this work, upon the poets of various countries both ancient and modern, sacred and profane, we may form some notions, and it is hoped such as are not inaccurate, of their respective merits. The more we examine into the nature of genuine poetry, the more traces we shall find in its productions of that transcendent genius, which we have endeavoured to delineate, and which reigns supreme in all the provinces of poetry, painting and music. To ascertain poetry by its effects may come within the sphere of the critic, and the man of taste: but to describe its extensive powers, and its potent influence and to mark its raptures and flights, "in thoughts that breathe, and words that burn:" when soaring on eagle wings "it ascends the highest heaven of invention," belongs exclusively to the poet himself. Let then the votary of the muses develope the mysteries of his charming art, and speak for himself: and let me, to supply my imperfect description, refer my readers to Horace, when he addresses Melpomene in the most exquisite of his lyric strains;—to Gray, describing the progress of poetry;—or rather let me call for the assistance of Shakespeare.

"The poet's eye in a fine frenzy rolling,
Doth glance from heaven to earth, from earth to heaven,

And as imagination bodies forth
The form of things unknown, the poet's pen
Turns them to shape, and gives to airy nothing
A local habitation and a name."

Of the nature and effects of the art, the sweet and original strains of the *Minstrel* may give no imperfect idea:

"But hail ye mighty masters of the lay,
Nature's true sons, the friends of man and truth!
Whose song, sublimely sweet, serenely gay,
Amus'd my childhood, and informed my youth.
O let your spirit still my bosom sooth;
Inspire my dreams, and my wild wanderings guide:
Your voice each rugged path of life can smooth;
For well I know, wherever ye reside,
There harmony, and peace, and innocence abide."
Beattie's Minstrel, xlii.

It is by such exertions as we admire in the choicest productions of ancient and modern times, that a poet communicates to his reader his own enthusiastic feelings, and opens those avenues of pleasure, which lead immediately to the imagination, and the heart. Such an extensive influence as he, and indeed every good writer, obtains over the mind, shows that literature justly claims to itself, among human inventions, a place much higher than the other imitative arts. The charms of music are vague and indefinite in their expression of emotions and passions, and short in their continuance. Painting is confined to objects of sight, and to a single point of time; but eloquence and poetry, to the advantages of them both, add many others, which are peculiarly their own. They admit a succession, a variety, and an accuracy of

ideas, and strengthen first impressions by a detail of striking particulars. They include a series of successive facts, which comprehend a whole subject from beginning to end. They rank higher in the scale of imitative excellence, in proportion to the exertion of mind employed in their productions, and the superior pleasure they convey. All the conceptions which the soul is able to form, all the beauties of nature and emotions of passion, all the range of sensible and abstract ideas, come within their reach; so that the field which they open to taste is the most extensive, fruitful and agreeable, in which we can possibly expatiate.

And here, as the principles of taste can only be founded with justness and solidity upon a knowledge of the GREEK AND ROMAN CLASSICS, we may fairly inquire more particularly into the nature of their pretensions to the high rank, which they have for ages held among literary productions. Is their value overrated, and do they owe their reputation solely to the venerable garb which antiquity has thrown around them? The classical scholar needs not be apprehensive lest his favourite authors should suffer by a fair answer to this question: for we can reply with the confidence of truth, that the estimation in which they are held is founded upon the most solid grounds. We view more particularly in Homer, Xenophon, Demosthenes, Æschylus, Sophocles, Virgil, Cicero, Livy, and Horace, that ardour of genius, that air of originality, that insight into the nature of man, and knowledge of the passions, that simplicity, and inimitable beauty both of thought and expression, which have deservedly obtained them the most conspicuous places in the temple of fame. They have enlarged

the boundaries of the human mind, and exhibit the fairest and most general ideas of nature in the brightest forms, and most elegant and energetic language. They have reared the standard of intellectual strength, to which all succeeding writers have repaired. They have raised their fame upon a foundation too solid to be shaken by caprice, or fastidiousness of opinion; for it is supported by the general taste of the best informed part of mankind. They have pleased because they have copied nature in her most beautiful form, and represented her in the most graceful and engaging attitudes. And they are justly intitled to attention, veneration, and gratitude, for the knowledge which they have conveyed to the understanding, the images with which they have brightened the fancy, and the sentiments with which they have softened and refined the heart. It is not therefore the affectation of pedantry, or an implicit obedience to prescription, which leads us to commend them; but their own intrinsic and incomparable beauties draw forth the spontaneous sacrifice of justice, which we are eager to offer at the shrine of genius. The continuation and the stability of their fame depend, not upon fashion, but upon the warm and sincere approbation of every sensible and well informed mind. From this conviction, the classical reader may venture to predict, that as long as true taste flourishes, they will ever be studied and admired; and when once they are ridiculed and thrown aside, such neglect will be a melancholy proof of the degeneracy of mankind, and will prove a sure indication of the approach of those dark ages, in which they fall a prey to ignorance and barbarism.

The pleasures enjoyed by the man of taste delight the mind, without exhausting the spirits. In his most

improved state he is neither undistinguishing nor fastidious,—neither too easy nor too difficult to be pleased. He views all objects with a disposition suitable to their nature, and is sometimes softened by the pathetic, sometimes enraptured with the beautiful, and sometimes elevated by the sublime, and feels a noble dignity of soul resulting from the consciousness and enjoyment of their attractions. For his gratification are displayed the various works of nature and art—the charms of poetry, the graces of painting, and the melodious strains of music. Correctness and elegance are the objects of his search: and he looks with peculiar pleasure upon those specimens of art, which are general without indistinctness, and accurate without tameness or servility. He remarks many minute beauties, where a common observer sees none; and his acuteness of perception prevents him from being deluded by false and specious ornaments.* Disliking equally to express himself in the language of high panegyric, or illiberal censure, he utters upon all occasions, when his sentiments are called for, the dictates of candour with the warmth of enthusiasm. He excuses many faults for the sake of the beauties,

* "It is true, that other men may see as well as a painter, but not with such eyes: a man is taught to *see*, as well as to dance; and the beauties of nature open themselves to our sight by little and little, after a long practice in the art of seeing. A judicious well-instructed eye sees a wonderful beauty in the shapes and colours of the commonest things, and what are comparatively inconsiderable." Richardson, p. 91. Webb on Painting, p. 12. "Quam multa vident pictores in umbris, et in eminentia, quæ nos non videmus? quam multa quæ nos fugiunt in cantu, exaudiunt in eo genere exercitati? Cicero, Acad. Quest. lib. ii.

to which they are allied; for he looks upon genius, as he does upon virtue, as exhibited in the imperfect characters of mankind; and being struck with its approaches to that perfection, which is unattainable, makes allowance for the failings of human nature.* He compares the beauties of one kind with those of another; and refers every work to that standard of excellence, which the productions of the greatest masters have enabled him to erect.

But while he aims at this refined character, he endeavours to divest himself of prejudice, and takes the most enlarged and comprehensive view of every subject. He endeavours to place himself in the exact situation of the person, whose productions he contemplates; makes due allowance for the peculiar habits of life, and prejudices of education, both of the artist and his countrymen; and at the same time imposes a due restraint on his own feelings; for he represses the envy of a rival, the petulance of a sciolist, the partiality of a friend, and the acrimony of an enemy. The man of taste is a genuine philanthropist, and a citizen of the world at large. If he is influenced by any bias, it is always in favour of genius; and the severity of his judgment is allayed by candour and good nature.

He, whose mind is thus gifted by nature, and refined by education, has one faculty of enjoyment more than the illiterate and the vulgar, and may be said to possess an additional sense. When he views the prospects

* "Si necesse est in alterutram errare partem, omnia eorum legentibus placere, quam multa displicere maluerim. Quint. lib. x, cap. 1. See Addison on the Pleasures of the Imagination.

of nature, he feels a satisfaction far more delicate and more pleasing than that which is experienced by the tasteless owner of the largest estate. He is persuaded that riches are only valuable either as ministering to the wants of the necessitous, or as bestowed upon the external decorations of life, which indeed are childish and frivolous, if they do not display elegance of mind. The cabinets, galleries, palaces, and parks of others administer to his pleasure; and he finds an agreeable companion in every picture, medal, and statue. By the pursuits of Taste, the attention is drawn off from sensual indulgence and low amusements. They promote tranquillity of temper, and thus become the allies of virtue, and the friends of the social affections. They form the middle link in the chain of pleasures, as they exceed those which are merely corporeal, and lead to such as are speculative and abstract. They give an elegant turn and cast of sentiment; they divert the attention from the turbulence of passion, and the sordidness of interest, and dispose it for tranquillity and reflection. They fill the mind with beautiful images, furnish agreeable subjects of conversation, and, as they are connected with a knowledge of mankind, and the operations of human intellect, they contribute to prepare us for the business of life, and the intercourse of society.

An intimate acquaintance with the works of genius, nature, and art, as displayed in their most sublime and beautiful forms, has an immediate tendency to expand the faculties of the mind, and to give the most engaging views of mankind and of Providence. By the cultivation of Taste upon such principles, the connexion between the feelings of natural and moral beauty is discovered, and the pleasures derived from

the eye and the ear terminate in the enlargement of the heart, and the improvement of the social affections; and thus is the cultivation of Taste carried to its most exalted height. Hence, as from being conversant with the works of the best masters, the man of taste dislikes whatever is unnatural, affected, and vulgar, and is gratified only with what is beautiful and fair; so he will be disposed, by a congeniality of sentiment, to reject whatever is depraved and vicious, and to adhere to that which is noble and honourable. The sensibility of the excellence of art and nature is favourable to the enjoyment of *moral* beauty; for if the mind has been duly improved by education, and is not corrupted by intercourse with the world, the heart may be softened, the manners refined, and the temper sweetened by a well directed attention to the arts of imitation. The improvement of Taste, therefore, will, if thus pursued, answer the most valuable of all purposes, and not only form a refined critic and connoisseur, but give to magnanimity, generosity, and every amiable quality, their proper ascendency above meanness, depravity, and selfishness. It will not only impart much of that refinement and elegance of thinking, which characterised an ADDISON, a SPENCE, a GRAY, and a REYNOLDS; but contribute to the love and the improvement of those virtues, which were the fairest ornaments of their minds.

CLASS THE SIXTH.

THE SOURCES OF OUR NATIONAL PROSPERITY, &c.

CHAPTER I.

IN recommending agriculture and commerce, as proper subjects of attention in a general scheme of liberal education, I am am not only justified by the importance of the subjects themselves, but by the institutions of respectable seminaries, and the opinions of writers of high character. The art of agriculture has been for several years publicly taught in the Swedish, Danish, and some of the German universities; and I am informed that a professorship for this purpose has been founded at Edinburgh. In addition to the advice of Milton and Locke, I have moreover the concurrence of Bishop Watson. His remarks upon the best mode of improving academical education are so much to the purpose, that my readers, I doubt not, will be pleased with the following remarks.

"I have spent the best part of my life in the university of Cambridge; and have not been wholly incurious in observing what, I thought, were either excellencies or defects in our mode of education. I mean not, upon this occasion, to enlarge upon either, but simply to take the liberty of suggesting an hint, which

has often engaged my attention. The hint respects—the utility of an academic institution for instructing young men of rank and fortune in the elements of agriculture; in the principles of commerce; and in the knowledge of our manufactures.

"This kind of study would agreeably solicit, and might probably secure, the attention of that part of our youth, which, in being exempted from the discipline of scholastic exercises, has abundant leisure for other pursuits; which, in being born to opulence, is (I will say) unhappily deprived of one of the strongest incentives to intellectual exertion—narrowness of fortune;—it would prepare them for becoming at a proper age, intelligent legislators of their country; and it would inspire them with such a taste for husbandry as might constitute the chief felicity of their future lives.

"When the treaty with Ireland was agitated in parliament, the utility of a comprehensive knowledge of our commerce and manufactures was perfectly understood both by those who possessed it, and by those who lamented their want of it. The commerce of wool, corn, cotton, hemp, flax, silk, beer, wine, spirits, salts, sugar, tar, glass, earthen ware, iron, copper, lead, tin, &c. &c. are subjects of great importance to this country; and it is humbly apprehended, that they are subjects also on which there are but few persons in either house of parliament, who have had an opportunity of being instructed during the course of their education.

"Of all the amusements or employments in which country gentlemen are engaged, that of superintending with intelligence the cultivation of a farm is one of the most useful to the community, as well as to the

individual who applies himself to it. Great improvements have been made in agriculture within the last fifty years; there is a chaos of printed information on the subject, which wants to be digested into form, in order to be made generally useful. The several agricultural societies which have been established by gentlemen in different parts of the kingdom, have done great service; we owe to their endeavours, and to the patriotic exertions of one deserving citizen, (A. Young,) the present flourishing condition of our husbandry; but far more gentlemen would probably have been induced to turn their thoughts that way, and all of them with better prospects of succeeding in their inquiries, had they, in their youth, been carefully instructed in the principles of vegetation, in the chemical qualities of soils, and in the natures and uses of different manures."

AGRICULTURE.

The pursuits of agriculture are connected with that love of the country, which may be called an universal passion. The charms of nature are there fully displayed; and every mind, which is not debased by vicious refinement, or enslaved by irregular desires, is eager to enjoy them. A principle so universally felt has never failed to call forth the powers of genius; and writers of all ages have expatiated on rural scenes and occupations with the most lively satisfaction. Every poet more especially claims the country as his peculiar province; from it he derives the most beautiful and striking descriptions, and is enabled to represent

those various prospects of nature, which are so highly gratifying to every ingenuous mind.

But rural scenes and occupations, considered as conducive to the support and comforts of life, become far more important and useful objects of speculation, than merely as they please the eye by their beauty, or charm the fancy by the images with which they enrich it. They lead to enquiries, which are worthy of the particular attention of every lover of his native country; inasmuch as they present a view of the powers of art combined with those of nature to improve the soil, to the greatest degree of fertility; and thus minister to the subsistence, the increase and the happiness of mankind.

Agriculture may properly be considered with respect to the eminent writers upon the subject, and the *countries* where it has chiefly flourished—its *superiority to commerce* as a source of permanent abundance and power—*the improvements* made since it has occupied the attention of English gentlemen—*the condition* of the husbandmen—*its comparative state* in France, Ireland, America, and England—and *the best methods* for its farther advancement in our island.

Agriculture is the art of causing the earth to produce the various kinds of vegetables in the greatest perfection and plenty. It is not only essential to the well being of society, in a rude and unpolished state; but is equally requisite in every stage of its refinement. As an incitement to its constant and uniform pursuit, it repays the exertions of mankind with regular and abundant returns. From the remotest ages it has been esteemed worthy of general attention. The simplicity of ancient manners rendered it an object not inconsistent with the rank and situation of persons of the

greatest eminence. Gideon, the renowned champion and judge of Israel, quitted the threshing-floor to preside in the publick assembly of his countrymen: and Cincinnatus, the conqueror of the Volsci, left his plough to lead the Roman armies to battle; and afterwards declined the rewards gained by his victories, to return to his native fields. In modern times this occupation has been held in no less esteem. There are not wanting those among our nobility, who take a lively interest in all rural improvements, and preside at the annual meetings of Agriculturists, with no less reputation to themselves, than benefit to the art. Washington, the late celebrated president of the United States of America, found the most pleasing relaxation of publick care in the superintendence of his own estate. The emperor of China, at the beginning of every spring, goes to plough in person, attended by the princes and grandees of his empire; he celebrates the close of the harvest among his subjects, and creates the best farmer in his dominions a Mandarin.

1. An art like this, which from its obvious utility must necessarily claim not only the patronage of the great, but the general attention of mankind, in proportion as they are civilized, has been not less distinguished as a subject to exercise the talents of eminent authors. In various ages many have written to explain its principles, and celebrate its excellence. Some have adorned it with the elegance of fancy, and others have methodized it with the precision of rules. Hesiod was one of the earliest of the Grecian poets to sing the praises of the plough, and in a work nearly coeval with the Iliad itself, has combined with the principles of the art many curious observations on the seasons most propitious to its various employments. At a pe-

riod of society, when its advantages were better understood, and its practice more generally diffused, Xenophon expatiated in his Economics, on the importance of Agriculture, and described its influence on the prosperity of the arts, and the advancement of civilization. Cicero was so much pleased with the sweet simplicity and beneficial tendency of this treatise, that he translated it into Latin: and in his admirable Dialogue on Old Age, Cato, the principal speaker, recommends it to the great Scipio, as the most powerful inducement to persevere in his favourite pursuit. Virgil has ennobled the subject with the dignity of Latin verse; and in his Georgics, the most correct and most original of his works, has described at large the rural occupations of his countrymen, the cultivation of land, the seasons most favourable to tillage, and the nature of grazing and planting. He has adorned every branch of his subject with refined and striking beauties of composition; and has so fully collected the best observations and choicest maxims of antiquity as to render it almost a superfluous task to consult the works of other authors relative to the progress, which his predecessors had made in this subject.*

At the revival of learning in England, Fitzherbert published a very useful work on the nature of soils, and the laws of vegetation. Hartlib, the correspondent of Milton, distinguished himself so much by his proposals for rural improvements, as to attract the notice of Cromwell, who rewarded his publication with a liberal pension. In the preface to the excellent work intitled *his Legacy*, he laments that no public di-

* It is pleasing to observe how far we are advanced beyond the Romans in agriculture and domestic economy.

rector of husbandry was established in England, by the authority of government; and that the English had not adopted the Flemish method of letting farms upon improvement. Evelyn, the author of the pleasing work on Forest Trees, afterwards endeavoured to inspire his countrymen with a love of agriculture; and he was followed by the ingenious Jethro Tull. The former by his excellent treatises, on soils and planting, and the latter by showing the superiour advantages of the drill husbandry, excited numbers to reduce their plans to practice.

The various societies, particularly those established in England, Ireland, France, Italy and Germany, have since contributed to suggest and disseminate a variety of improvements. To three writers, who have lately favoured the world with their publications, our country is much indebted. *Marshall* has, by his close attention to the particular occupations of the country, proceeded to many valuable conclusions, highly useful to the farmer: and *Anderson* has shown great accuracy of observation in his remarks on particular soils and plants, and in his proposal of trying experiments upon an extensive scale. *Young* has far surpassed his predecessors in the compass and variety of his researches, as he has reduced the directions of others to practice, suggested many plans of improvement in every branch of farming, and added much to the general stock of knowledge, by actual observations on foreign countries, as well as on the different counties in the united kingdom.

Much to the honour of this art, we find that all the nations of old, which were celebrated for their progress in it, were free and independent. In the most glorious times of Greece, and in the most virtuous period

of the Roman republic, agriculture flourished, and was held in great estimation. The face of nature has felt the bad effects, which have arisen from the degeneracy of this heroic people; for ever since idleness, despotism, and superstition have spread their pernicious influence over Italy, the rural arts have declined, and the fertile fields of the Campagna de Roma, which once supplied vast multitudes with employment and sustenance, are now changed into barren heaths, and pestilential marshes. It was under a mild government the inhabitants of the Netherlands carried the cultivation of the soil to a degree of perfection, which was long unattained by any of the other states of Europe. From them our island has received the most useful instruction; and such has been the activity and persevering spirit of the English as in many respects to surpass the ingenious and industrious people to whom they are indebted for these advantages.

Agriculture has been gradually improving since the errors of ancient husbandry have been corrected, and vulgar superstitious traditions exploded. A solid and rational system of the art has been founded upon clear and intelligible principles. The application of natural history and chemistry to it has greatly accelerated our improvements, in proportion as inquiries have been made into the causes of the fertility and barrenness of land; the food and nutriment of vegetables, the nature of soils, the best modes of meliorating them with various manures; and, more than all, by the introduction of foreign seeds, and adopting from the nations whence they were borrowed their methods of cultivation. The connexion between causes and effects is now better understood; and a degree of ability, management, and skill, far superiour to the

practice of former times, is exercised in the various departments of Agriculture. In the process of husbandry, as it has been conducted for some time in Great Britain, little is left to the precariousness of chance; and the bigotted regard to ancient customs gives place to the dictates of good sense, and more correct views of utility. The intelligent farmer, profiting by the wider diffusion of knowledge, which is the characteristic of the present age, derives more assistance from the philosopher, the naturalist, and the chemist, than his ancestors could obtain; and is furnished with the useful principles of every art in the least degree conducive to the improvement and success of his occupations. As this knowledge has been applied to practice, successive improvements have been made, and extended from one province to another; until the country has assumed a new aspect, and the general appearance of our island, which two centuries ago abounded in barren wastes, interspersed with gloomy forests, now exhibits in successive scenes, long ranges of fields waving with every kind of vegetable production, and rich and verdant pastures filled with thriving flocks and herds.

2. The most obvious advantage of agriculture is, that it supplies mankind with the greatest quantity of provision. Savage tribes subsist by hunting wild animals in large forests; and thus a few people, comparatively speaking, gain from an extensive tract of waste land a precarious and scanty support. The next step in the progress of society is to breed and rear flocks and herds of tame animals, which is the state of a people just emerging from barbarism, as was the case of the Greeks in the times described by Homer. This progress of society to the condition of

shepherds is a more certain and permanent mode of procuring subsistence, and has greatly the advantage over the hunting state. Another step places mankind in a situation, which gives them the full benefit of their industry and ingenuity, at the same time that it more abundantly ministers to their wants. This last and greatest improvement consists in tillage, which entirely changes the quality of food, and increases the quantity in a vast proportion.

It is obvious therefore to conclude, that no other method of procuring the means of subsistence can be so well adapted to an increase of population. This is a point of the greatest political importance; for provided a people be industrious and well employed, they cannot increase with too much rapidity. Monarchs may vainly imagine that their glory consists in extent of territory, the pomp of state, the greatness of their revenues, or the terror of their arms: but an accurate knowledge of mankind will convince them, that true glory can only arise from ruling a people, who, free from the weight of oppression, and reaping the fruits of their industry, are induced to multiply their species from a desire of communicating to their descendants the blessings of security and comfort, which themselves enjoy. Under such circumstances a great population is the safeguard of the country, as well as the glory of the king. Every encouragement which can be given to it is strictly conformable to the constitution of nature, as she seems to have provided for an indefinite increase of mankind. And as the fruitfulness of the earth is likewise indefinite, there seems to be no natural obstacle to their united advancement and progression, far beyond the point they have

at present reached in Great Britain, and most other parts of the world.

Commerce is of a precarious and fluctuating nature; particularly as it takes its rise from artificial as well as natural wants. Merchants remove from place to place according to the comparative cheapness of labour, and their prospects of improving their capitals. Grass now grows in those streets of Antwerp and Ghent, which three centuries ago were thronged with merchants from all parts of Europe. The manufactures of wool, at present the boast of English trade, after the fall of the western empire, were wrought in Venice, Pisa, Florence, and Lucca: thence they were transferred to the Netherlands; and adopted about two hundred years ago by our ancestors. Some branches of this trade have lately migrated from Norwich into Prussia and Germany. The cotton mills of Manchester and the northern counties have been equalled, if not exceeded, within these few years, by those of Scotland. But where agriculture is made the great object of pursuit, the inhabitants of a country are not exposed to such vicissitudes; their employments are less transient; and they are not under the necessity of having recourse to other places for the supply of their immediate wants. They are not exposed to the extortion or the hostility of their neighbours, who have it not in their power to impoverish them by selling corn at an exorbitant price, or reduce them to famine by withholding it. Priestley on History, p. 365. Many of the states of America, which are almost entirely occupied by farmers, are independent of all the rest of the world. Maritime and commercial nations may indeed enjoy all the fruits of other countries; but as the land which produces those fruits is the sole

property of the owners of the soil, they can impart or withhold them at pleasure. Agriculture therefore constitutes the only firm and permanent basis of subsistence.

But although agriculture justly claims the ascendency over commerce; yet it is a truth founded upon experience, that the only method to encourage agriculture is to excite other kinds of industry, and afford a ready market for the exchange of corn for other commodities. If the inhabitants of a country have no motive for raising more grain than is barely sufficient for their own consumption, they will not always raise even a necessary quantity; and a bad seed-time, or an unfavourable harvest, will be followed by a famine. This was frequently the case before the bounty was granted by parliament upon the exportation of corn in the year 1689.

3. The business of agriculture was for a long time confined to those, who, from their contracted sphere of life, were exposed to the imputation of ignorance and narrowness of mind. The improving spirit of the times, added to considerations of self-interest, has given new dignity to the occupation. Gentlemen of independent fortune and liberal education for some time past have attended to rural occupations, so that its various branches are conducted immediately under their own inspection and management. Placing no longer an implicit confidence in their servants, they are become the superintendants of their own farms, and take a pleasure in introducing every improvement and every new machine for the purpose of accelerating and abridging labour. The public spirit of some, and the curiosity of others, induce them to vie with their neighbours; and this emulation is greatly increased

by the annual competitions, which take place in several counties. The encouragement given to the mechanic arts, and the different treatment of soils, seeds, and plants, are likely to be of the greatest public utility. From this attention of country gentlemen to farming more experiments have been tried, to which the finances of the less opulent farmer are not adequate; more discoveries made, and more systematic and useful plans adopted within the last thirty years, than were practised for a century before.

In different counties a great variety is observable in the conduct of farmers, in their courses of crops, their custom of fallowing, and of abridging labour by mechanical improvements. Every year produces some favourite schemes, which have been practised with success upon some particular spots of ground under peculiar circumstances. These schemes it may be imprudent to reject altogether, although repeated trials may be necessary to induce the cautious to adopt them. He who speculates with a view to forming general principles, must not stop to consider local peculiarities, or partial experiments; but ought to consider husbandry in its grand outlines, and then descend regularly to the detail of circumstances. He surveys the richest and best cultivated counties, and remarks in what proportion the lands are every year productive either of corn or some other vegetables, preparatory to its cultivation. He inquires for what reason sheep and cattle are spread over the face of a fertile country in such great numbers; whether manure does not depend upon them, and corn upon manure. If the answer to such questions be satisfactory, then the farmers are entitled to his praise: and their practice is a tacit censure of the ignorance, pre-

judices, idleness, and want of spirit in the inhabitants of other places, where fallowing abounds, where manure is purchased in small quantities, where sheep are few and in bad condition; and a good soil is so far exhausted as to produce no other crop than scanty ears of rye or barley, amidst a luxurious produce of all kinds of weeds.

It is not easy to determine whether the *old* or the *new* husbandry be preferable in every country: with regard to this point, the climate, the situation of particular land, the soil, the skill and dexterity in the management of the implements, and new machines, in addition to the comparative expence in raising crops must be accurately attended to, before a decision can in all cases be made.

Drill-husbandry has been well described as "the practice of a garden introduced into the field." Every person of the least reflection must be sensible that the former is far preferable to the latter, only that it is a little more expensive. But if this expence be generally far more than repaid by the superior goodness and value of drilled crops, it ought to have no weight in comparing the two methods of husbandry.

Nature has an immediate tendency to the multiplication of the human species, and her influence is more particularly visible in the country, where pure air, plain diet, and the regularity of rural employments conduce to this great end. The country is the prolific seminary of cities. Accordingly we find that emigration advances from the former to the latter. Villages are the nurseries of mankind, and their inhabitants can alone make up for the vast and rapid consumption of the human species, caused by the luxury, celibacy, prostitution, and impure atmosphere of large towns, and particularly of the metropolis. In addition to the

checks which population receives from great cities, may be enumerated the inequality of the ranks and fortunes of men, which in some countries may for ever prevent an increase of inhabitants from being considerable, provided the upper ranks have it in their power to prevent the combinations of the lower, and to keep property in the same state. The depopulation of Italy in the later times of the Roman empire, was occasioned by the great inequality of ranks, the prevalence of luxury, the number of country-seats, and arable land being converted into unproductive pleasure grounds.

Excessive population, if unattended by adequate means of support, so far from proving a blessing to a country, is calculated to produce the most deplorable scenes of wretchedness. The unhappy extremity to which a people are reduced by its excess is evident among the Chinese, where the inhuman custom of exposing children prevails, in consequence of the difficulty of supplying them with food; and every species of vermin is sought to sustain the existence of wretches perishing with hunger. In France, a few years past, the price of labour was so low, as scarcely to save a workman from starving; and that business was performed badly by three men, for which in England one is found sufficient. France, before the revolution, exhibited to the eye of the traveller all the misery and inactivity of the half starved and idle people. From such instances it is evident that a nation possesses its proper number of inhabitants when they are commensurate with the quantity of food, which it either produces, or can constantly purchase with its manufactures from its neighbours; and when it is not liable to be exposed to famine by the failure of a har-

vest, as has sometimes been the case in France. The difficulty of procuring subsistence therefore constitutes a check to population, and operates as a great obstacle to marriage; which will seldom fail to take place, when there is a reasonable prospect of provision for a family.

4. The *Peasant*, although he may be disregarded by the superficial, or viewed with contempt by the vain, will be placed by those who judge of things not by their external appearance, but their intrinsic worth, in the most useful class of mankind. His occupation is conducive not only to the prosperity, but to the existence of society. He prepares the ground, scatters the seed, and reaps the harvest of those vegetable productions, which form the principal support of human life. For this end he braves the rigour of the winter, endures the heat of summer, and patiently supports all the vicissitudes of weather. He is placed at a distance from most of the objects which can excite his ambition, or satisfy his curiosity. His life is one unwearied course of hardy exertion, and persevering toil. The vigour of his youth is exhausted by labour; and what are the hopes and consolations of his age? Sickness may deprive him of the opportunity of providing the least supply for the closing years of life; and the gloomy confinement of a workhouse, or the scanty pittance of parochial help, is his last and only resource. By his condition may be estimated the prosperity of a nation; the real opulence, strength, and security of the public are proportionate to the comfort which he enjoys; and his wretchedness is the sure criterion of a bad administration of government. The distance between him and the nobleman, whose soil he tills, may appear very great; but the occupa-

tions of the peasant are connected with his plenty, affluence, and magnificence, by ties, which, however they may escape common and superficial observation, are yet strong and numerous. The enjoyments of the great are procured by the sweat of his brow, and by his toils they are enabled to run the round of pleasure and dissipation. The prince or the peer, who is surrounded by a numerous retinue, and whose luxury is supplied by the produce of every quarter of the globe, will do well to recollect, that he is every day indebted to the accumulated labour of the lower classes of society, of which the poorest and the most unhappy peasant contributes his share.

And here humanity as well as justice may ask, what ought to be the recompence of so useful and valuable a member of society? He ought certainly to be rendered as comfortable as his situation of life will allow. And the circumstance of their dependence upon his exertions ought to induce his employers to contribute all in their power to alleviate his necessities, and reward his labours. That country gentleman will deserve to be celebrated like a Howard, and a Hanway, who, reducing a plan to practice, which does not benefit the lower classes of the community too much at the expence of the higher, shall give to the husbandman a stronger interest in the constitution of his country; enlarge the circle of his comforts; supply his board with more provision; clothe him more effectually against the inclemency of the seasons; and enable him to lay up a competent supply for the day of sickness, and the infirmities of age.

CHAPTER II.

THE SUBJECT CONTINUED.

OUR inquiries are carried on to consider the comparative state of agriculture, with a view to ascertain in what country it has the superiority, and to what causes that superiority may be ascribed. The field of comparison cannot be very extensive; since it does not include very cold or very hot countries. The nature of the climate will determine its just limits, direct our attention to the degrees of latitude, which are the same, or nearly the same, as those which include the island of Great Britain.

Various advantages seem to conspire to carry the agriculture of France to a greater degree of perfection than our own. Among these advantages it is not intended to enumerate the forty societies of agriculture, which, considering the state of the art in France, at a recent period, are really contemptible*. Its soft and genial climate is highly propitious to the growth of corn. Nature has been peculiarly kind to this delightful country, in giving such prolific powers to its soil. The proportion of bad land in England to the whole kingdom is greater than in France.

Yet, destitute of these advantages, England can boast of a produce of corn far superior to that of France. The average growth of wheat and rye is twenty-four

* My statement is principally taken from A. Young's Travels in 1789, and from the answers obtained to my questions in the Isle of France, Picardy, and Normandy in 1791.

bushels upon each acre, which forms a vast superiority to eighteen, the growth of France; and the care taken in dressing the corn in England makes the difference at least twenty-five to eighteen, and perhaps rather more. The superiority of our crops of barley and oats is doubly greater than those of wheat and rye, and may justify us in fixing the proportion of the general produce of English corn at twenty-eight to eighteen. Ten millions of acres supply more corn than fifteen; consequently a territory of an hundred millions of acres more than equals another of 150 millions. Young's France, p. 341. It is from considering the effects of a superior growth upon population, commerce, and wealth, that we can easily and satisfactorily account for the power of England, which has so frequently ventured to engage in wars with a country far more extensive, populous, and more favoured by nature. It proves how much the labour and expence bestowed by man can effect to raise the prolific powers of the earth, and ought to be an incentive to the farmer in one place to adopt the management of ground, and to introduce the crops, which are found to succeed in another.

In proportion to the size of the two islands, *Ireland* is more generally cultivated than England, as it has less waste land, and more natural fertility. But the kindness of nature is so little seconded, that few tracts can yield less pleasure than those which the agriculturist surveys in that country. We are indeed apt to attribute much efficacy to the genial soil of England, without considering that some of the most improved spots are almost entirely indebted to the industry and art of the inhabitants for their various productions. The state of Irish agriculture admits of scarcely any comparison, as the land is in general extremely un-

improved; the Irish farmer may be indebted to nature for a crop, but is under little obligation to the industry, management, or expence bestowed upon his lands by his predecessors or himself. Ireland is capable of all the high cultivation of England, and would amply repay the proprietors for the capital employed for her improvement. This important object, so conducive to her prosperity, might in time be secured, if the public spirit, or the sense of private advantage, should induce the opulent landholders to reside upon their estates, and by their own example give a sanction to agricultural improvements; and if they would relieve the tenant from the oppression and extortion of middle men and stewards, and let their lands upon the same conditions as England.

In the *United States of America* agriculture in all its branches is pursued with ardour, and is an object of general importance, as it employs a great proportion of the inhabitants. We may form an idea of the surplus produce of North America from the supplies which it can furnish, without injury to its own inhabitants, when we are alarmed by the apprehension of scarcity. And it is supposed by competent judges that the Americans are far from having acquired any great degree of skill in the management of their lands; nor have they as yet adopted those improvements, or expended those large sums upon their farms, which would tend to advance their fertility, and place them more upon an equality with the agriculturists of Britain.

On pursuing our inquiries still farther, we shall discover the principal causes which contribute to give Great Britain such manifest pre-eminence over France, Ireland, and America;—a pre-eminence which is

acknowledged by all candid foreigners, and induces them to repair to this island to be spectators of our improvements, with a view to the introduction of them into their own countries.

With respect to soil and climate, our advantages are certainly not so great as those enjoyed by the French. If however we have not their genial sunshine and warmth, which give to the grapes of Burgundy and Champagne their rich colour and delicious flavour; we are not so subject to those autumnal hurricanes and storms, which frustrate the labour of the husbandman, and destroy the harvests of whole districts at once. To these the central provinces are chiefly exposed; and no year passes without many places suffering to a degree, of which we have no conception, and on the whole to the amount of no inconsiderable proportion of the whole produce of the kingdom. Young, p. 296. If in a part of Artois, in the beautiful plains of Alsace, and upon the borders of the Garonne, their soils be richer, ours are found to be highly improveable; and it is from this power of improvement that English husbandry derives its excellence. If nature here be assiduously courted, she will return the gifts of her admirers with a liberal hand; and if diligence, skill, and liberality combine to second her efforts, she will crown their labours with success, and scatter among them the blessings of abundance.

1. The first cause to be considered is the *influence of political freedom.* Our government encourages every person to make his best exertions, in full confidence that his labours and risks will prove, not only highly beneficial to himself and his family, but will be secured to them in succeeding times. In some mechanical arts, in which the labour is short, and there

is a prospect of an immediate return, the subjects of monarchical France might arrive at a great degree of eminence. They might form the beautiful china of the Seve, finish the elegant watches of Paris, or embroider the rich tapestry of the Gobelins: but in the tardy process of agriculture, those who carry them to a great extent, and have the spirit to hazard much property for a considerable time, can never be induced to embark in them without the fullest assurance of security. Our agriculture is also much indebted to the uniform management of land, however it may differ in its quality. Where the soil is rich, nature will do much for herself; but where it is coarse and poor, the English farmer is not discouraged, but, by diligence and a copious supply of manure, succeeds in raising a crop. The sands of Norfolk and the fens of Lincolnshire are made to produce turnips, oats, and barley; and they are as well cultivated as the richest land in other counties. The same principle governs districts which widely differ in the nature of the soil; and the hand of persevering industry guides the plough, and scatters the seed in them all.

In France, wherever nature was peculiarly benign, the farmer was accustomed to give to her prolific efforts some assistance; but where she was unkind, no extraordinary labour or expence was bestowed to supply the defect. The poverty of the common people in Italy and Spain may be attributed to the richness of the land, and the genial nature of the climate. There agriculture is an easy art; the impoverished ground is left fallow; and the warmth of the sun, and the mild temperature of the air, quickly restore its exhausted fruitfulness. The poor husbandmen, who were the slaves of their landlords, gained only a scan-

ty pittance for their toils: the luxuriant vineyards of Champagne and Burgundy, highly profitable to their owners, were cultivated by peasants, who had scarcely raiment or bread

The comparison which has been drawn between England and France, is not intended to refer to the *present* condition of the latter, as it is not very easy, at this moment, to give an accurate and general statement of its agriculture. The consular government has taken some very useful methods to ascertain the actual state of the Republic, probably with a view to its general internal improvement; and the statistical reports very lately made by the prefects relative to twenty-six departments, appear to have been drawn up with considerable care and precision.*

2. There is no country, in which *the arrangement of crops* is better adapted to arable land, than in England. This is a circumstance which distinguishes the agricultural knowledge of the present age as much as any other improvement whatever; and it marks the line of distinction between a good and a bad farmer, and a country well or ill cultivated. So great is its importance, that all other articles in comparison are insignificant, because the general produce of the land depends so materially upon it. Of this mode of arrangement the French were totally ignorant; for some of the richest lands in the Pays de Caux, in Normandy, and the Isle of France were frequently left fallow, for the purpose of forcing scanty crops of wheat, and spring corn of a bad quality. The pro-

* I mention the number of these I have been able to inspect. The reports from the departments of la *Sarthe* and the *Bas Rhin* are the most circumstantial.

vince of Picardy, very often condemned to fallows, and manured perhaps not more than once in five or six years, produced only one tolerable harvest in three. In England, flocks of sheep are thought requisite for the produce of corn, and the crops are regulated with an immediate view to their summer and winter sustenance. It is found by general experience, that by such courses regularly pursued a tract of land will yield a harvest double to that which it would otherwise produce.

Amid these courses of crops, in which various kinds of pulse, grass, and vegetables are successfully introduced, nothing deserves more attention than the cultivation of *turnips;* and no agriculturist ever deserved better of his country, than he who first introduced them into the fields of England. No plant is better suited to the climate, flourishes more, even in the northern parts of it, or contributes more to the fertility of land. This root is the glory of the English husbandry. Its great excellence consists in nourishing and improving the soil, preparing it for the reception of wheat, and furnishing nutritious food for all sorts of cattle. Its introduction was of far more value, than the acquisition of a colony, or the establishment of a new branch of commerce. For this inestimable vegetable, and the improvements resulting from its cultivation, our island is indebted to Flanders, the fruitful parent of our commerce, agriculture, and manufactories. The first effectual trial to raise turnips in England was happily made in a county, the most proper of all others for their reception, as the soil of *Norfolk* is in general light and sandy. The place of its earliest cultivation is constantly kept in the public view, as it

is found that the seed sent to distant places is apt to degenerate; so that those who wish to produce this excellent vegetable in perfection are obliged to procure fresh supplies of Norfolk seed. Slow is the progress even of obvious improvement;—its introduction into the neighbouring counties was tardy; and not more than half a century has elapsed, since it was first planted in Suffolk and Essex. Its adoption is now very general throughout Great Britain: and it may be remarked, that in proportion as turnips are cultivated, and their utility is more fully understood, the general system of husbandry becomes more advantageous and complete.

3. An additional cause of the preeminence of our agriculture, not less striking than the foregoing, is *the expence bestowed upon land*, as well as upon every necessary improvement. This is evident in the sums laid out for manuring, irrigating, draining, and fencing, as well as for the improvements in the breeds of cattle, the introduction of new implements of husbandry, the durable materials of common implements, and the commodiousness of farm houses, and all their appendages. To these circumstances great attention is paid because it becomes every day a truth more generally understood, that the productive state of agriculture depends materially upon the money employed in its various branches. No other people have ventured to invest such large capitals in their lands; and foreign nations are as yet unacquainted with the invaluable secret, that the vegetable treasures which are buried in the earth, become the most abundant sources of wealth*.

* "The capital employed in husbandry in the British isles is considerably greater than is employed in France.

Our agriculturists are daily improving in knowledge and daily applying that knowledge to practice. They are well skilled, as we have before observed, in the nature of different soils, and understand the best methods of meliorating them by various manures, the preservation of their fertility, and the increase of their

It surely is not necessary to observe in this age, that the productive state of agriculture in a country depends much more upon the capital employed, than on any other circumstance whatever; and since ours is larger than that of France, though in the possesion of fifteen millions of people only, (for that of France is to be connected with twenty-five or twenty-six millions) the British dominions ought to be essentially richer and more powerful than France.'

"I have calculated the capital of the farmers in France in all the provinces, and the medium of my notes is forty hillings an acre.. A similar calculation of the capital employed in the husbandry of England gives four pounds per acre. By capital is meant the average of all farms, all stocks, and all periods of leases. Add thirty shillings for the less quantity of permanent improvements, and we have the total of three pounds ten shillings for the inferiority of French to English capital employed in agriculture, which upon 131,000,000 of acres forms a deficiency of 458,500,000l. sterling."

"With such an immense superiority in the produce of corn, the more obvious surprise should have been, that the resources of England compared with those of France were not yet more decisive. But it is to be observed, that there are other articles of culture, to which recourse must be had for an explanation. Vines are an immense object in he cultivation of France, and yield all the advantage s and even superior ones, to those afforded by the assiduous culture of corn in England, &c." See Young's France, p. 341, 343, 430.

produce by regular courses of crops. In short, they display a degree of diligence, spirit, and liberality in all rural improvements hitherto discovered, not to be equalled by any nation in the world.

4. Still however, even a careless observer may remark, that we have not yet reached the summit of excellence. Our ancestors have made a respectable progress in this art; yet much still remains for us and our posterity to accomplish. It will be the work of many succeeding generations to carry to their utmost bounds, the natural advantages of Great Britain. Where the ground is already cultivated, it is in many places capable of higher improvement; and where it is suffered to lie waste, its gloomy, wild, and unfruitful appearance is a tacit reproach of the public negligence. Inclosures have been found highly beneficial; and the practice of making them ought to become universal. The kingdom is deformed in many parts by immense heaths, moors, commons, marshes, and fens, amounting, according to some computations, to ten millions of acres. The extent of uncultivated ground in the vicinity of London is a glaring disgrace to our country. The tillage of any considerable proportion of this land would secure the nation against much of the evil of deficient crops; and the plenty of one district might supply upon a larger scale the deficiency of another. All the profits arising from the grain raised upon such lands would accrue to the public, as well as the wages of the husbandmen employed; and the increase of the stock of labour would contribute to remove the causes of emigration, idleness, and beggary. Waste lands, wherever the soil will admit of cultivation, ought to be enclosed, and converted into farms

of various sizes. The practicability of such a plan will be evident on our reflecting, that where corn now grows in great abundance, many even of the present generation can remember wild heaths and barren wastes. Thus the public supply of provisions would in due time be greatly augmented, and the inhabitants of this kingdom would be enabled to make new exertions in proportion to the increase of cultivated land*

To carry such improvements into execution, every encouragement ought to be given by the legislature; and for what purposes could the public money be better employed, than in works of such general and obvious utility, all no less tending to the great increase of provisions, for an augmenting population, than to

* "Let it only be supposed that every field in England, of the same original quality with those in the neighbourhood of the metropolis, and consequently capable of the same fertility, were by a like management made to yield an equal produce; and it may be asserted, I believe with truth, that the quantity of human provision raised in the island would be increased five-fold." Paley, p. 590.

"It is observed in Mr. King's calculations, the accuracy of which has never yet been questioned, that of thirty-nine millions of acres in England, ten, or more than a fourth, consisted in heaths, moors; mountains, and barren lands; and this, exclusive of woods, forests, parks, commons, roads, &c. There have since that time been many improvements made. But it will surely be allowed no improbable assertion, that one fiftieth part may yet be gained from the unprofitable state in which it is. This, though purchased by the nation, would be no expence; for money expended by the public, for the immediate service of the the public, cannot with propriety be called *expence*." Campbell, Pol. Surv. vol. ii, p. 732.

strengthen the arm of government, and promote the welfare and happiness of the people?

The tillage of land, before waste and unfruitful, is in every point of view an acquisition of territory highly beneficial. Unlike distant colonies, which furnish a perpetual pretext for hostility, lands newly cultivated excite no jealousy in the neighbouring states, and can furnish no grounds for those frequent wars, which are the severest scourges of mankind, and disgrace the professors of a religion founded for the express purpose of disseminating benevolence, and establishing peace.

The advice of projectors, when they direct their ingenuity to a subject so important as that we are discussing, calls for the most serious attention. Few plans recommended by them seem better calculated to carry the rural arts to perfection, than the establishment of experimental farms. These ought to be formed in different counties, and the expences defrayed by government. Here the nature of particular soils, as adapted to various modes and processes of cultivation, the peculiar qualities and comparative value of grasses and plants, might be ascertained. Here the best and most economical mode of rearing and fattening all kinds of useful animals might be tried, as well as the methods of abridging labour by improvements in machinery. Our country can boast of academies of painting, and societies for the encouragement of arts; but yet it wants *a practical institution* of this kind, conducted upon *an extensive and liberal scale*. By collecting and comparing the experiments made in these various places, great advantages might be gained: and for this purpose, a periodical publication of transactions would be highly useful, as a repository and

vehicle of detached observations. By the admission of honorary members, this society might likewise carry on an extensive correspondence, include the patrons of the agricultural interest in all parts of the world, and compare their different processes, discoveries, and plans of operation for the purpose of general utility.

Abundance of food is the only wealth of the industrious poor, as other possessions, consisting in ample revenues, splendid houses and equipages, exclusively belong to the rich. Upon the quantity and cheapness of the common necessaries of life, the industry, health, and strength of the people, and of course the general comfort of society, and the prosperity of the nation, must ever depend. It is therefore the duty, as well as the interest, of government, to take every possible method to prevent their dearness, by guarding against their scarcity. Manufactures and commerce are the great sources of wealth; and in order to prevent them from being dried up and exhausted, it is necessary that agriculture should be an object of the first attention, and that its produce should be attainable at a cheap rate. It is an excellent observation, "that neither agriculture nor trade can flourish, where the general ease does not begin with the class of labourers." Priestley's Lectures on History, p. 367.

Nature will not suffer her laws to be violated; the call of the appetites is more importunate than the solicitations of fashion; and the means of subsistence must be secured to mankind before they go in search of superfluities. The arts of necessity are antecedent to those of elegance.

From the preceding observations may be deduced some of the most useful principles of *political econo-*

my. The real power and opulence of a nation consist in *the number of its inhabitants well supplied with the necessaries of life;—subsistence is the proper measure of population,—and the earth is the source of subsistence.* All other means of wealth and dominion, such as *commerce, abundance of the precious metals, and extent of colonies*, promote the *true* prosperity of a state, only in proportion as they encourage AGRICULTURE, which is *the most valuable of the arts, as well as the most solid and most durable basis of Plenty and Power.*

CHAPTER III.

COMMERCE.

IS well described to be "an operation, by which the wealth or work either of individuals or of societies may be exchanged by merchants for an equivalent, proper for supplying every want without interruption to industry, or check to consumption."* This subject will be considered with an immediate reference to the particular state and circumstances of our own country.

The natural advantages enjoyed by an ISLAND are superior to those which belong to any country, which forms a part of a continent. The soil of the former is

* See Encyclop. Britann. vol. ii, p. 195. Priestley's Lectures on History, p. 386. For the rise and progress of commerce and navigation, and an excellent account of *Columbus* and his discoveries, see history of Modern Europe, vol. ii, p. 224, &c.

commonly more rich, fertile, and various, than that of the latter. The sea affords the inhabitants security against the invasion of enemies, and furnishes them with inexhaustible supplies of provision. The fisheries on their coasts dispose islanders to navigation, and hence they are led to establish an extensive intercourse with the most distant places. From their general propensity to maritime affairs, they acquire a spirit of enterprize, and distinguish themselves by their courage in the maintenance of their own customs and forms of government; and frequently gain a permanent ascendency over neighbouring and even remote states.

To these general advantages, which were possessed in ancient times by Crete, and at a less distant period by Rhodes, Great Britain adds some, which are peculiar to herself. Her line of sea-coast is very extensive in proportion to the size of the whole island, and abounds with deep bays and capacious harbours. Her ports are convenient, and good for anchorage. Those on the western side of the island are nearly as well situated for the southern trade, as the French; and they are far superior in number, safety, and depth of water. With respect to the northern and the Baltic trades, the situation of France before the late war, when it had not the command of the coasts of Holland, admitted of no comparison. Rivers and numerous canals afford the convenience of water carriage to all the inland counties of England, and not only connect them with each other by the internal circulation of trade, but afford an easy and cheap conveyance to the ocean.

These various advantages have for successive ages been carefully improved, as the great works of public utility, completed in our sea-port towns, sufficiently attest. Harbours have been deepened, piers and moles

have been erected to break the force of the waves, and form a safe asylum for ships. Wet and dry docks have been constructed for the building and reparation of ships, and commodious quays to unload their freights. In every place where necessity requires such aid, light-houses have been raised upon the lofty cliffs, to guide the mariner in the darkest nights along the dangerous coasts. These expensive and laborious works are carried on with ardour, to promote navigation in every direction, as London, Whitby, Liverpool, Yarmouth, Bristol, Ramsgate, and Falmouth, fully prove; so that British vessels can sail by every wind that blows: and the ships of foreign nations are invited, by such conveniences, to bring their numerous articles of commerce to every part of our shores. Such various monuments of utility prove the incessant energy of industry; and that in every instance, where the influence of government is propitious to the spirit of enterprize, those difficulties of nature and situation may be conquered, which past ages regarded as insurmountable.

The ardent and indefatigable diligence, which raises Great Britain above the rest of Europe, is visible in every place, distinguished by manufactories, mines, fisheries, and agriculture. In Manchester, Glasgow, and Norwich, the fabrication of cotton, wool, and flax, into cloth, linens, and stuffs, supplies multitudes of all ages with the means of subsistence. In Birmingham and Sheffield iron and other metals are worked for every purpose of use and ornament. The hardy inhabitants of the North and West labour in the productive mines of coals and metals; while the mariners either explore their own, or venture to the icy seas of Greenland, and the distant recesses of the Southern Ocean, for

various kinds of fish. The farmers cultivate the surface of the earth, and grain grows on extensive plains, which a century or two past exhibited, in pathless woods or barren heaths, the rudest state of nature.

This survey of the active industry of our countrymen, so much diversified, and operating in such various directions for the benefit of themselves and the community at large, must naturally awaken our curiosity to inquire, I. into the *advantages*; II. the *principles*; and, III. the *comparative state* of that commerce, which their labours enable the British merchant to extend to every part of the globe.

I. The great spring of commerce is mutual want of the necessary articles of life, or the supposition of want, with respect to luxuries and superfluities. This principle has the same operation, whether the farmer immediately sell his corn to the manufacturer, or whether the disposal of manufactures be more circuitous. The farmer, for instance, may not be in want of cloth and therefore will not give corn to the weaver. In such a case the weaver sends his cloth to a foreign market, where it is exchanged for the wine of Portugal or the tea of China, which, when imported, the farmer readily purchases. The machine of commerce may appear vast and complicated, its movements may be many, and its operations circuitous; but the main spring *necessity*, either real or imaginary, is invariably the same.

Commerce is the source of wealth to the merchant; but its advantages are far from being confined to himself. It supplies the wants of one country by importing the articles of another, and gives a value to superfluities, which they could not otherwise possess. It increases the revenue of the state, and thus contributes

to its general opulence and grandeur; and it preserves the independence of the British empire, by the strong support and large supplies afforded to our maritime strength. Hence we acquire a decided superiority over every other nation, and give the inhabitants of remote as well as neighbouring countries the most convincing proofs of our riches, prosperity, and power. No commercial country is long exposed to the evils of its own barrenness or necessities; and the riches of one place are soon made the common stock of all others. Commerce is the bond of general society, which unites the most distant nations by a reciprocal intercourse of good offices. By extending the sphere of activity through various parts of the earth, by satisfying the real and multiplying the imaginary wants of mankind, and by quickening their thirst for enjoyments, it becomes the most lively and most general principle, which actuates the world. Under its attractive and beneficient influence, the whole world becomes one city, and all nations one family.

The influence likewise, which it produces upon the *manners* of mankind, renders it a more interesting subject of investigation. A regular intercourse subsisting between different nations contributes to cure the mind of many absurd and hurtful prejudices. Trade carried on between persons of different sects and religions has a tendency to lessen the opposition of opinion, which was formerly the cause of hatred and hostility. It promotes benevolence of disposition, inasmuch as it extends the connexions and intercourse of society, and increases the love of peace and order, without which its operations cannot be carried on. The merchant engaged in honourable traffic is the friend of mankind, and is occupied in a constant ex-

ercise of good offices, for the benefit of his necessitous fellow creatures.

Commerce will be found to have had no small influence in calming the minds of the nations of the earth into a state of repose and complacency. The sudden revolutions, heroic manners, and extraordinary events of ancient times resulted from that ferocity of temper, unsocial spirit, and inequality of ranks, which commerce tends to annihilate. Iron is now a material article of traffic, which was formerly employed only as an instrument of destruction. The states of Europe are brought nearly upon a level by this intercourse; a spirit of general emulation is excited, and it is justly remarked that those who possess the most extensive trade command the source of opulence and power. Through the bounty of nature most nations have some superfluity to exchange for the productions of others; and the expectation of gaining advantages, which they cannot otherwise secure, turns their ingenuity, labours, and enterprises into many different channels. Hence the arts of necessity and elegance are diligently cultivated, invention is roused to find new materials for foreign consumption, a competition arises between rival manufacturers and artists, and commerce employs and unites the families of the earth, from the frozen regions of Russia to the burning sands of Africa;—from the isles of Britain to the populous and vast dominions of China.

From this intercourse results an effect, which is peculiarly advantageous to the less polished and civilized nations. By the frequent communications which are necessary for the purpose of bartering commodities with the cultivated European, they are made acquainted with useful arts and improvements, and are

taught the value of science, and the blessings of christianity. Thus by degrees the great disparity between man and man is destroyed, useful knowledge finds its level, and the inhabitants of the different quarters of the world arrive at the equality of power, which awes ambitious nations into due respect and reverence for the general rights of mankind.

From commerce we likewise derive a more enlarged knowledge of the terraqueous globe, and its inhabitants. We become correctly acquainted with the animals, vegetables, and minerals of every soil and climate, and the natural history of all countries, no longer debased by exaggeration and fable, acquires the value of precision and truth. We enlarge our acquaintance with mankind, are enabled to estimate their different manners, remark how modes of life and habits of thinking are varied, according to their different situations, and how the passions and dispositions are modified. The Laplander, like his climate, is dull, gloomy, and cold: the Asiatic, under the influence of an ardent sun, is fiery, sensual, and vindictive. Thus are we enabled, as we become more acquainted with the general faculties and powers of man, to complete our theories as to his true nature and constitution; and as we see him under every variation of climate and government, we can form a comparative estimate of his disposition, manners, and civil polity, founded upon the sure basis of fact and experience.

Among people of the same country, likewise, commercial intercourse gradually introduces a spirit of order and good government, and is highly favourable to the liberty and security of individuals. Its beneficial effects have been no less visible in conciliating the affections of the natives of the same country to each

other. During the prevalence of the feudal system our ancestors lived in a state of suspicion, servile dependence, and war; and knew scarcely any distinctions, except those which subsisted between the different professions of the church and the army, or the more servile relations of lords and vassals. But at present, the various ranks of society are connected by closer ties, and entertain greater cordiality and esteem for each other, as their intercourse is more frequent, and the superiour refinements of society have quickened the sense of mutual want, and mutual dependence.

In Britain indeed commerce has acquired a degree of rank and dignity elsewhere unknown, except in the United States of America. Many of those engaged in it have done and continue to do it honour by the excellence of their education, and the liberality of their minds. Of those who do credit to the relations of domestic life, of those who are distinguished in the senate, for public spirit and useful knowledge, of those who at the call of distress come forward with the most prompt and liberal assistance, who is more conspicuous than the ENGLISH MERCHANT?

Attention to this subject will open a view of the intimate connexion subsisting between the landed and the trading interests. They can never be considered as clashing and distinct, without a manifest injury to both, and an ignorance of their respective effects and operations. How far each has contributed to improve the other, is evident from considering the comparative value of land, at a period antecedent to the present flourishing state of commerce. The fee simple of estates is at least four times as valuable at present, as it was two centuries ago. This among many others that

might be adduced, is a decisive proof, that country gentlemen are in reality as much interested in the prosperity of trade, as even the merchants themselves. In short, agriculture and commerce have the same direct influence in promoting national abundance and prosperity. These effects they certainly will produce so long as the government of a country imposes no heavy burthen upon their exertions; but encouraging the enterprising spirit of individuals, who embark large fortunes in various concerns, promotes the interest of both merchants and cultivators of land at the same time, and maintains it in such due proportion, that the advancement of the one does not tend to the depression of the other."

A concern of such magnitude as commerce, involving such a variety of articles, carried on by such various means, and extended to such different climates, must necessarily be liable to many inconveniences, to which agriculture is not subject. Those who traffic in foreign countries subject themselves to the dangers of the sea, and the inclemency and diseases of cold and hot climates. In consequence of trading with the natives of countries less civilized and refined than themselves, and more weak and defenceless, they are tempted to practise the arts of chicanery, and to have recourse to acts of injustice and violence, and thus gradually become dead to the feelings of humanity, and regardless of the admonitions of religion. However incompatible commerce may appear to be with the work of destruction, it is often the cause of war. The desire of a small island, or the inconsiderable trade of a remote coast, are sufficient motives to rouse a rival nation to arms. These wars are fatal and destructive, in proportion to the number of the foreign settlements

which belong to the great maritime powers of Europe. They spread like the wasting flames of a conflagration, involve every quarter of the globe in alarm and danger, and expose the lives and property of the unoffending natives to the attacks of unprovoked enemies. Some of the articles imported from foreign countries are such as make it doubtful whether they ought to be encouraged. The rum of the West Indies, which is the fruit of the toil and sufferings of some slaves, as well as the bribe given to Africa for the purchase of others, is too often used, when brought to the mother-country as the means of intoxication. Sugar, the produce of those islands where war, pestilence, and the disorders of the elements, contend for the mastery in the destruction of man and his labours, ought to be rejected from our articles of luxury, until it is produced by the toil of freemen.

A sagacious writer has remarked, that in observing the advances of commerce "in its *first* stages, we shall find that it supplies mutual necessities, prevents mutual wants, extends mutual knowledge, eradicates mutual prejudice, and spreads mutual humanity. In its *middle*, and more advanced period, it provides conveniencies, increases numbers, coins money, gives birth to arts and sciences, creates equal laws, diffuses general plenty, and general happiness. If we view it in its *third* and highest stage, we shall see it change its nature and effects. It brings in superfluity and vast wealth, begets avarice, gross luxury, or effeminate refinement among the higher ranks, together with general loss of principle."*

* Brown's Estimate of the Manners of the Times, p. 153.

II. The great principles of commerce are the result of sound reason, and the united experience of enlightened merchants. A short statement of some of them may tend to illustrate the nature of British traffic, and lead to important inquiries upon this subject in general.

Of all articles of commerce materials produced and manufactured at home are the most profitable. This is evident, because the whole labour for their cultivation, manufacture, and exportation, is divided among people of our own nation, and they exclusively share all the profits. Wool, which is the staple commodity of the kingdom, is made into broad cloth, which, before it reaches the consumer, undergoes a great variety of operations, and passes through an hundred different hands: so that there is no produce whatever, of which the benefits can be more widely diffused among the industrious part of the community. Suppose the value of English wool produced in one year to amount to three millions, the expence of working it up into various articles to be nine; its total value, when manufactured, will amount to twelve. Suppose we export annually to the value of three millions; and the number of persons maintained by this manufacture to be a million. Let it be considered that these persons expend what they earn in all the necessaries of life, and that the procuring such necessaries is a source of profit and employment to the other members of the community; and then we may judge, what an immense addition is made to the natural stock of industry and gain by this valuable article, even without taking into the account the sailors employed to export the various articles, into which it is wrought,

and the artificers of machines used to accelerate many parts of the manufactures.

The next in value are raw materials imported from other countries, manufactured in England, and then reserved for domestic use, or exported for foreign consumption. Their importation precludes the want of foreign manufactures, prevents the balance of trade from inclining against us, and secures all the profit arising from passing entirely through the hands of our own countrymen.

It is a received maxim in commerce, which may at first sight appear paradoxical, considering the high estimation in which the precious metals are held, that it is better to take commodities of foreign growth in return for our own, than to be repaid with gold and silver. Although these metals are the ultimate objects of all commerce; yet to obtain them in so short and easy a manner would not augment the stock of the nation, in comparison to what is added by our taking raw materials, which will furnish employment for multitudes, and many of which are exported to the same countries, from whence they were originally brought. If, for instance, we take money for the broad cloth exported to Spain, the immediate profit may be considerable; but it establishes no lucrative reciprocity of commodities. But if we take wool in return, there is a new fund for the labour of the manufacturer, and an additional profit to be derived from its importation. The fleeces therefore of Andalusia are much more valuable objects of importation to the English merchant, if he consults the greatest advantage of his country, than the silver of Potosi, or the gold of Peru.

From these propositions may be drawn a corollary, that the utility of the various branches of foreign commerce is measured by the number of persons, which each branch employs and supports. It is evident, therefore, that the exchange of wrought goods for raw materials is much more lucrative than the exchange of one species of wrought goods for another; and that of course the exchange of our own raw materials for the wrought goods of other nations is extremely disadvantageous. If, for example, ten thousand Englishmen be employed to make cutlery ware for the French, and five thousand French be employed in cambrics for the English, then the French must ultimately pay the five thousand men so employed, or, in other words, maintain them at their sole expence. It is true, that the value of the respective commodities makes a considerable difference in the sum paid to balance accounts: yet the great principle that it is not money, but labour properly recompensed, which constitutes the true wealth of nations, will always demonstrate, that the balance of trade is in favour of that country, which employs the greatest number of its subjects.

That nation will be both opulent and formidable, which conveys its own manufactures, or commodities of its own procuring, to foreign ports in its own vessels. For thus are secured all the branches of industry to its inhabitants, which can spring from any article of their trade, as it gives employment to the manufacturer and the sailor, with all their numerous train of dependent artisans, and ensures to them of course every profit and advantage, which their occupations can in any degree produce. This tends to the full establishment of navigation, and opens the wide and

boundless ocean to its exertions. The Dutch were formerly the principal carriers for all the nations of Europe. This employment alone raised them to their late condition of wealth and prosperity. Such employment cannot however in itself be regarded as a permanent basis of power, and it is less profitable than either the domestic or foreign trade of consumption. It is also very precarious, because in proportion as other nations improve the advantages afforded by the convenience of their own harbours, and increase the quantity of their own productions, they will convey their own goods in their own ships. Such has been for some time the practice of England, as by far the most considerable part of British goods is exported in British vessels. Of the utility of this measure our ancestors were early sensible, as is evident from an act of parliament made in the reign of Richard II. The celebrated *Act of Navigation*, passed in the reign of Charles II showed more fully the sentiments which the nation entertained of the importance of this practice. The immediate object of this act was to check the naval power of Holland. Considered as to its ultimate tendency, it was the wisest law which could possibly be framed, and has obtained the commendation of all persons, who have correct views of our commercial interests.

Under the influence of parliamentary encouragement, the advances made in the art of navigation and in the construction of ships have been equally remarkable. Attention to these objects has conduced to the improvement of the royal navy, which has gradually increased in proportion to the increase of merchant ships. By this circumstance the advantages of commerce, considered as a great national object, are fully

displayed; for upon the number of sailors, and the quantity of shipping, depend the defence and security which Britain finds in her great and formidable fleets, and the glorious pre-eminence she maintains among the nations of Europe as THE FIRST OF MARITIME STATES.

As a nation may rise to opulence and power by acting upon such principles as those before established; so may it decline and be impoverished, if the scale be suffered to preponderate against her, by encouraging the commodities of other countries to the prejudice of her own. This will happen when articles of mere luxury are imported, and not taken in exchange for our own productions.

Much more disadvantageous is that trade, which introduces a commodity not only consumed among us, but which hinders the consumption of the like quantity of our own, as is the case with brandy and geneva, which diminish the consumption of malt, and are therefore with great propriety subjected by government to high duties. But that is undoubtedly the most injurious of every species of traffic, which supplies the same goods we can produce ourselves, especially if we can make a sufficient quantity for our own consumption. This is the case with cloth, silk, china, and muslins, the manufactories for which have been established, with great labour and expence, in various parts of England.

To enumerate other maxims of commerce is to transcribe the works of the most approved authors who have written at large upon the subject. The most important of them all may be compressed into one grand summary. That species of commerce, which makes money flow *most copiously*, keeps public and

private credit *high*, which gives to the merchant a *reasonable profit*, and to the labourer and the artisan a *comfortable subsistence* in return for their industry; which increases the value and the rent of *land*, and produces a considerable revenue to the *state*, must always be esteemed the most valuable: since these are the *only indubitable marks*, by which the advantage of any public or private trade can be demonstrated. And it may be proper to observe, that the same criteria which assist us in judging by what kinds of trade we gain or lose, will likewise direct us what treaties of commerce are beneficial, or the contrary.

"No certain method has been as yet pointed out to ascertain the *balance* of trade. It can never be known from the exports and imports for a few years, even if these statements could be absolutely depended upon. The rate of exchange, which has been called a political barometer, would be really so, if commerce only operated upon it: but this not being the case, it can be no rule at all. The custom-house books are no unerring guides; whatever is smuggled does not appear; some exports are beyond the truth, and some things are not rated at all. The plenty or scarcity of money cannot for many reasons be relied on. After all, our foreign traffic hath been for a series of years increasing: if the general balance had been against us, we must by this time have been brought very low, if not totally undone. But as every thing we see proves the contrary, it may serve to convince us; and this the rather, because foreigners show their sense of the matter by the sums they entrust in the public funds."*

* Campbell's Political Survey, vol. ii, p. 705.

As British commerce has increased in importance, it has in a proportionable degree engaged the attention of the legislature. The exclusive privileges of trading to particular places have been given to companies of merchants; and rewards have been held out to encourage the productions of our own country, and exclude those of foreigners. Accordingly penalties have been laid both upon the importation of such foreign articles as can be produced at home, and upon the importation of such articles from countries, where the balance of trade is against us. The exportation of our own produce has been encouraged by drawbacks, bounties, advantageous treaties of commerce with foreign states, and the establishment of colonies.

The privileges granted to chartered companies by government have undoubtedly encouraged a spirit of monopoly, and been too favourable to the exclusive interests of a few merchants, at the expense of the public at large. By the charter of the East India company the rest of the nation are excluded from trading beyond the Cape of Good Hope; and by the charter of the Turkey company they are prohibited from having any commerce with the dominions of the Grand Signior. Thus the interests of the whole are sacrificed to the emolument of a few. A small number of merchants confine their exports and imports to as small a quantity as they please. The natural consequence is, that they confine the markets to themselves, and they can both buy and sell at their own price. As charters confer exclusive privileges, they operate as a check upon all those who come not within their limits, and in their own nature produce an established monopoly. They are therefore inconsistent with a received maxim, which suggests

the expediency of competition to render trade advantageous to the public.

"All restrictions on trade are naught: and no company whatever, whether they trade in a joint stock or under regulations, can be for public good, except it may be easy for all, or any of his Majesty's subjects, to be admitted into them, at any time, for a very inconsiderable fine."*

Still, however, it must be acknowledged, as a vindication of those, who have instituted the present system of commerce, that they were obliged sometimes to adapt their measures to the circumstances of particular times, and to assimilate their plans to those of other nations, in order to secure equal advantages. No individual merchant was bold enough to embark his whole property in the adventurous issue of a distant trade; whereas numbers were inclined to associate for that purpose, because the sum employed in the adventure was not of material consequence, whatever might be the result of the enterprize. The legislature gave them a charter as a recompence for their risk; and, regarding only their immediate benefit, looked not forward to a time when the mercantile spirit would be more widely diffused, and British subjects would complain that any other limits, except those of nature, were set to their exertions.

But it seems at present to be admitted as a settled principle that commercial companies are injurious rather than beneficial to the public, as they trade at much more expence than individuals, and give rise to illegal

* Sir J. Child. This principle is adopted by Smith, and very fully treated in his Wealth of Nations, vol. i, p. 291. vol. iii, p. 110.

traffic, which is proved by the number of neutral vessels, that carry English goods to foreign ports. The Americans are sensible of these inconveniencies, and therefore open a free trade to all parts of the world. Destitute of established colonies, they rival us in the various branches of our trade with the East Indies.

III. That we derive great advantages from our extensive commerce is evident from a comparison between the former and present state of our public and private affairs. The wool of England, which at present constitutes the staple commodity of our traffic, was in former times sent abroad, and returned to this country in a manufactured state. Germany furnished our ancestors with hardware; at present the hardware of Sheffield and Birmingham has an unrivalled market in various parts of Europe, Asia, and America. The common interest of money was twelve per cent.; and it at present fluctuates, in time of peace, from three to five, which it cannot legally exceed. Land was sold for no more than twelve years purchase which can be disposed of for thirty. For the elegant articles of looking glasses, paper, and silk, the pride and boast of France; for the carpets of Turkey; for the porcelain and the beautiful and fantastic ornaments of China; for the clocks and watches of Germany; and the glass of Italy; our workmen can substitute such productions as are little, if at all inferior in materials or execution, in elegance of design, or cheapness. The coal-trade which for ages was considered merely as a local convenience, is now become the basis of all the northern coasting trade; and nurses and maintains many more seamen than before that period were supported by the whole commerce of the nation. The streams of traffic have been turned into new channels, and

now fertilize our soil much more than they formerly enriched the nations of the continent. We excel those by whom we have been taught the various arts of manufacture; for all countries attest, by their regular and extensive dealings with us, the ingenuity, expedition, and dexterity of our workmen.

"The discovery of America made an essential change in the state of Europe. By opening a new and inexhaustible market to all the commodities of Europe, it gave occasion to new divisions of labour and improvement of art, which in the narrow circle of the ancient commerce could never have taken place for want of a market, to take off the greater part of their produce. The productive powers of labour were improved, and its produce increased in all the different countries of Europe, and together with it, the real revenue and wealth of the inhabitants." Wealth of Nations, vol. ii, p. 170.

The population not only of great cities, but of villages, has particularly increased in the manufacturing counties of the north, with the increasing means of subsistence. Compared with their present magnitude and splendour, both in public and private, the English cities of former ages were villages, and houses were little better than cottages. The comforts and luxuries of life are increased by the accumulated fruits of every climate, and the house of every gentleman is a repository of choice productions of the most distant countries. The NAVY OF ENGLAND, which once consisted of nothing more than inconsiderable barks, is now composed of the largest ships. To the islands at the extremities of the globe it conveys protection, or it threatens vengeance. Its resistless strength let France, and Spain, and Holland proclaim; since their own annals can instruct them, that Britain rose in former

times superior to their separate attacks. This generation has witnessed her power in repelling their combined efforts, when leagued in formidable confederacy to subdue her, exhausted by a war with her American colonies. Braving their utmost fury, her soldiers defied their enemies from the rock of Gibraltar, and her sailors bore her triumphant flag from the northern seas to the shores of India.

Nor did the *late war* afford less opportunities of displaying her maritime glory. The single force of Britain was again opposed to France, to Spain, and to Holland: and yet, under circumstances of peculiar disadvantage and difficulty, their numerous fleets were in every place defeated; and the exploits of Howe, St. Vincent, Duncan, Nelson, Smith, and Warren, have entitled them no less to the gratitude of their country, than the praise of all succeeding generations.

These advantages have Britons derived from their insular situation, improved by a spirit of enterprise, and heightened by indefatigable industry. They experience the best effects of commerce in the refinement of national manners, in public magnificence, and private abundance, united with the ability of defending against the attacks of the most formidable invaders, all the blessings conferred by the possession of liberty, and the enjoyment of property. Around the wide compass of the globe we may look in vain for a country, which has of late years discovered more strong indications of growing prosperity; for have we not great and flourishing towns, filled with magnificent private houses, stately public buildings, accessible by convenient roads and elegant bridges, surrounded by lands well cultivated, and inhabited by people of all ranks, better supported than those of the same clas-

ses in any country in Europe? Have we not an extensive foreign trade, great domestic produce, the circulation of property quick and unembarrassed, an easy and expeditious transfer of property in the national funds, public and private credit high, and a powerful navy? A combination of such important circumstances necessarily proves a nation to be opulent, prosperous, and powerful.

Such are the imperfect outlines of the actual state of this island. It is however far distant from the point of perfection, to which it is capable of advancing. The capacity it possesses for commercial is as remarkable as that which it claims for agricultural improvement. It is such as calls not only for the attention of the legislature, but of every gentleman, who wishes to advance his own interest, and the general good. The counties of Northumberland, Cumberland, and Westmoreland, are double the province of Holland in extent; but in population they fall short, in the proporof one to eight. Many parts of Wales show the remains of cities once more populous, and of roads once much more frequented than at present. The cattle in the pastures, fish in the waters, and metals and coals in the mountains, clearly point out the means of again restoring or exceeding its ancient prosperity; more particularly as the country abounds with water and fuel—the two great instruments of manufactures. Many rivers in different parts of our island ought be deepened, widened, and made navigable; and many more canals dug to convey various kinds of goods at a small expence to a quick market. These salutary measures would produce the general improvement of all the surrounding country.

The timber, which we purchase in foreign countries for ship building, and other purposes, might be raised upon some of those large tracts of land, heaths, commons, and hills, which are suffered to lie waste. To a commercial and maritime people, it is an object of the greatest concern to be independent, particularly in this respect, of precarious and foreign supplies.

A repeal of the severe penalties on the exportation of wool would doubtless prove highly beneficial: and no reason can be given for the present restriction, which does not as well apply to the exportation of wheat. With respect to that important article, which may be considered as a species of manufacture as well as wool, it is well known, that the increase of its culture, by bringing large tracts of land into tillage, has been immense, since the bounty allowed on its exportation. Bounties might likewise prove highly advantageous by the promotion of the various fisheries in Scotland, and upon our coasts. They are able to supply an almost inexhaustible stock of provision—they furnish a nursery for seamen, and on that account merit every encouragement.

Although its inhabitants have been nearly doubled within a century, yet the island of Great Britain is by no means so populous as its size will admit. How beneficial, therefore, must any measure be, which induces the natives of this country to remain contented at home, as well as encourages persecuted foreigners to bring useful arts from their own country, and settle in England! The heavy taxes laid by government upon the most necessary articles of life, as well as the fines imposed by corporations on ingenious artisans, are weights laid upon trade and industry which clog the wheels of the commercial machine, and impede its

due motion. To prevent the state from losing from such sums being withdrawn from the public treasury, taxes might be laid upon articles of luxury, extravagance, and foreign produce. If our manufactures cannot be sold at a moderate price, they will not long continue to be purchased by foreigners; and if that channel of traffic be dried up, we shall be exposed to depopulation, poverty, and all the unhappy consequences of expiring trade. Our merchants, if oppressed by accumulated taxes, will not be able to stand in competition with those of France, which, not burthened with a national debt in any degree equal to ours, will not only undersell us in the foreign markets, but will draw English capitals from this country, and encourage emigration by the cheapness of the necessary articles of life. Any alleviation with respect to duties will be so far from a detriment, that it will ultimately prove an advantage to the public revenues. Weights and measures ought to be brought to the same precise standard all over the kingdom, in order that many of the frauds which now prevail may be removed. The number of ale-houses ought to be diminished, as they are not only the haunts of intemperance, but the retreats of idleness; they produce a fondness for dissipation, which is highly injurious to domestic habits of life; and they corrupt the minds and relax the industrious habits of the common people.

There exist, without doubt, many causes, which obstruct the execution of such projects; and the great expense, the discord of clashing interests, and the varieties of opinion upon t ese subjects, may long retard their execution. There is, however, sufficient ground to expect, that they may in process of time be

partially, if not completely, adopted; since it is a truth, confirmed by daily observation, that our countrymen are sufficiently disposed to embark their property in a joint stock; and when the utility of an enterprize will justify their attempts, they come forward with alacrity to engage in all public works. Their capitals are much larger than formerly, and of course they are better enabled to run the risk of expensive undertakings.

The first steps in the useful arts, which are the most difficult, have long ago been taken; their fruits are reaped by society at large, and furnish the greatest incitements to perseverance. Of this kind is the encouragement given to navigable canals, which afford the cheapest and most easy circulation of inland commerce. We may reasonably indulge the hope that many such schemes will be realized, because the greatest works, of which we now reap the benefit, once existed only in plans and projects. However at first condemned by the ignorant and ridiculed by the idle they were at last reduced to practice.

It is the happy characteristic of the English to improve upon the arts of other nations; it only remains therefore, that, in order to complete our reputation for this excellence, we adopt every useful scheme, and, by adding our dexterity to the invention of others, make nearer approaches to perfection.

The CAPACITY FOR IMPROVEMENT visible in our soil and its productions constitutes the intrinsic and transcendant excellence of our island; and the industry and public spirit of its inhabitants form some of the most valuable parts of our national character.

These united advantages undeniably prove, upon a comparison with the circumstances of the other

nations of Europe, that Great Britain is eminently qualified by art and nature to carry on a widely extended commerce, as she derives every requisite for that purpose from her insular situation, the produce of her lands and plantations, the excellence and variety of her manufactures, the skill and perseverance of her sailors, and the opulence and enterprising disposition of her merchants.

CHAPTER IV.

FOREIGN TRAVEL.

AS travelling is considered a part of education indispensably necessary for all young men of rank and fortune, it becomes a very interesting subject of observation. The most important topics which this subject includes are its *general advantages*, the consideration of the *time of life* when the traveller ought to begin his excursions, the *previous information* necessary to be acquired, the *countries most proper* to be visited, the *objects* most deserving his attention; and what are the *best effects*, which a tour through foreign countries is calculated to produce upon the *character and manners*.

Travelling, as far as it introduces a man into genteel and well informed society in various parts of the world, and leads to an extensive knowledge of persons and places, expands the mind, removes local prejudices, produces a comparison between our own and foreign

countries, satisfies that curiosity and that fondness for change, which are so natural to mankind, supplies new sources of pleasing and useful information, and conduces to the increase of philanthropy and generosity of sentiment. He who is confined to his own country reads only one page of the book of human nature, and perpetually studies the same lesson; nor does he understand that completely, from his ignorance of its relative merit, and connexion with all other parts.

If the great and the opulent reside constantly in their own country, they are acquainted only with a luxurious, easy, and enervating mode of living. Foreign travel enures them to the severity of wholesome hardships; the dangers of the sea, disturbed nights, scanty fare, uncomfortable inns, and bad roads diversify their lives, and place them in new situations. Thus they experience such changes and wants, as render the luxuries which they can command at home, and which otherwise would be insipid, the sources of real enjoyment; and their occasional privations of ease and plenty may increase their sympathy for the lower and more indigent classes of the community.

He who forms his notions of mankind from his constant residence in one and the same place, resembles the child who imagines the heavens are confined to his own limited prospect. The Russians, before the reign of Peter the Great, thought themselves possessed of every national blessing, and held all other people in contempt; so contracted were they in their notions as to believe that their northern mountains encompassed the globe. The untravelled Spaniard may suppose that every Englishman is dressed in boots and a hunting-cap, and that horses and

dogs are the constant subjects of his thoughts and conversation. The untravelled Englishman may imagine that the Spaniard is always wrapt in a cloak, that he is a prey to perpetual jealousy, and is haughty, superstitious, and inactive. These misconceptions may probably result, in a considerable degree, from the popular novels of each country; and the Knight of La Manca and Squire Western may have equally caused them to mistake a particular for a general character, and filled them with false and exaggerated notions of each other. Thus is one nation disposed to draw such a caricature of another, as gives an extravagant as well as an unpleasing idea of the original; it is only amid the civilities of mutual intercourse, and the exchange of friendly offices, that the true and faithful likeness can be taken.

"Not long ago the map of the world in China was a square plate, the greater part of which was occupied by the provinces of that vast empire, leaving on its skirts a few obscure corners, into which the wretched remainder of mankind were supposed to be driven. If you have not the use of *our* letters, nor the knowledge of *our* books, said a mandarin to a European missionary, what literature, or what science *can* you have." Ferguson on Civil Society, p. 313.

Travelling not only divests the mind of such prejudice as this, but gives the highest polish to the manners. This polish however does not result from that excessive attention of the traveller to his deportment and external appearance, which takes off the mind from more important pursuits, and gives a studied air to his general behaviour; but arising originally from true benevolence, and a desire to please, is perfected by intercourse with well-bred and polite company,

displays itself upon every occasion in an easy and unaffected carriage, an unembarrassed address, and proper attention to all around him. It has no connexion with effeminacy or formal ceremony, or with that cringing mien and affected complaisance, which would be inconsistent with the ingenuousness, and would lessen the dignity of a British gentleman.

The *qualifications* of a young traveller ought to be such, as may not only exempt him from the imputation of frivolous curiosity, but enable him to derive the greatest advantages from his excursions. His mind ought to be improved by a classical education: after having studied at the university the most important points, which form the subjects of this work, he will be well qualified for his intended tour. He ought to possess a critical knowledge of his own language, to understand the laws, constitution, and history of his own country, the forms of proceeding in our courts of justice, and the state of our commerce, agriculture, and arts. In such points he ought by no means to be deficient: since to make a comparison between other countries and his own, is more particularly requisite as an obvious and leading object of attention. Such preparatory acquirements will give a young man great advantages in his conversation with foreigners, particularly if they are intelligent and well informed. They form the basis of education, upon which travelling may be raised, as its highly ornamental and elegant superstructure.

Let him not hasten to *foreign* countries, before he has satisfied his curiosity by exploring the most interesting parts of his *own*. There are various places which will fully repay the labour and the expense of his excursions, directed as they may be to different

and pleasing objects of pursuit and observation. It is almost superfluous to mention the wild and romantic scenes of Wales, and the North of England; the highly cultivated fields of Norfolk, Berkshire, and Kent; the manufactures and commerce which distinguish London, Liverpool, Manchester, Bristol, Sheffield, and Birmingham, and the large and populous county of York; the beautiful scenes of the Isle of Wight and Derbyshire, and the flourishing cities, fisheries, and manufactories of Scotland. In the course of these domestic excursions, whatever is most beautiful and curious in the fine arts, whatever is deposited in the cabinets of the virtuosi, produced in manufactories, or dug in the mines, should not be disregarded.

"In those vernal seasons of the year, when the air is calm and pleasant, it were an injury and sullenness against nature, not to go out and see her riches, and partake in her rejoicing with heaven and earth. I should not therefore be a persuader to them of studying much then, after two or three years that they have laid their grounds, but to ride out in companies with prudent and staid guides, to all quarters of the land; learning and observing all places of strength, all commodities of building and of soil for towns and tillage, harbours, and ports for trade; sometimes taking sea as far as to our navy, to learn there also what they can on the practical knowledge of sailing and of seafight. These ways would try *all their peculiar gifts of nature*; and if there were any secret excellence among them, would fetch it out, and give it fair opportunities to advance itself by, which could not but mightily redound to the good of the nation, and bring into fashion again those old admired virtues and excellencies, with

far more advantage, now in this purity of christian knowledge." Milton's Tractate on Education.

Such excursions to the most interesting parts of his own country will sharpen the appetite of the young traveller for the curiosities of other countries, and place him upon an equality with those inquisitive foreigners who resort to England. And such foreigners indeed cannot give a stronger proof of their discernment and well-directed curiosity. Considering the progress made in arts and sciences, the improvements introduced by commerce and agriculture, the number of our flourishing and opulent cities, especially the inexhaustible wonders of our metropolis, the variety and ingenuity of our manufactories, the splendour of our court; the prospects of the country, diversified with all the beauties of nature; the collections of pictures, statues, and natural curiosities; our formidable navy, which is the terror and the admiration of the world; the character of the men, ingenuous, intelligent, and hospitable; the beauty, delicacy, and modesty of the women—considering all these circumstances, we cannot attribute the satisfaction which they express, during their residence among us, to mere flattery: but may fairly conclude, that it arises in a great degree from the genuine pleasure, which they derive from the survey of one of the most interesting countries in the world.*

It is not uncommon to meet with travellers, who are grossly ignorant of many interesting parts of their native country. The French are remarkable for this de-

* Dean Tucker has given an excellent list of the objects most deserving the attention of a foreigner, who travels in England. Essay on Trade, p. 111.

fect and the English are far from being exempt from it. Too many of our countrymen, who go abroad, are unacquainted not only with places remote from that in which they were born or educated, but with many things, to which they had it in their power to be familiarized from their infancy. An Englishman once discovered very great surprise, when he was informed at Rome, that the church of *St. Stephen's, Walbrook*, was one of the most elegant specimens of modern architecture. Such ignorance exposes the traveller to the ridicule, and perhaps contempt of intelligent foreigners; and may induce him to express his admiration even of inferior productions abroad, where he may be informed that finer specimens of art are to be seen in his own country.

If such qualifications as those before stated be necessary, the traveller cannot of course be very young, when he sets out upon his excursions. All the writers upon the subject, particularly Milton and Locke, concur in reprobating the custom of sending a raw and inexperienced boy abroad. Lord Chesterfield indeed, if his recommendation should carry much weight, appears to countenance it: but we must recollect, that the plan of education, which he proposed for his son, had not only a general view to form a polished man of the world, but to qualify him for a diplomatic department.* Before a proper age, a youth is exposed to every inconvenience and danger, which can possibly arise from quitting his own country. Previous to that period, the curiosity of a young man is commonly

* Lord Chesterfield's best observations on the use and improvement of travelling are to be found in Letters 79, 98, 150, 235, 256, 265.

indiscriminate, his judgment is incorrect and hasty; and of course he is inadequate to the just comparison between what he has left at home, and what he observes abroad. It is vainly expected by parents, that the authority of a travelling tutor will be sufficient to prevent the indiscretion of their son, and confine his attention to proper objects of improvement; but admitting every tutor to be a Mentor, every pupil may not be a Telemachus.* The gaiety, follies, and voluptuousness of the continent solicit in such captivating forms the inclinations of the young, that they soon become deaf to the calls of admonition. No longer subject to the control of a teacher or a parent, they are eager to follow the dictates of their own inclinations, and to launch out into the wide ocean of indulgence and dissipation. "But if they desire to see other countries at three or four and twenty years of age; not to learn principles, but to enlarge experience, and make wise observations, they will by that time be such as shall deserve the regard and honour of all

* "Much of the success certainly depends on the choice of the *tutor* or travelling companion. He should be a grave respectable man, of a mature age. A very young man, or a man of levity, however great his merit, learning, or ingenuity, will not be proper; because he will not have that natural authority and personal dignity, which command attention and obedience. A grave and good man will watch over the morals and religion of his pupil; both which, according to the present mode of conducting travel, are commonly shaken from the basis, and levelled with the dust, before the end of the peregrination. A tutor of character and principle will resolve to bring his pupil home, if it is possible, not worse in any respect than he was on his departure." Knox on Education, vol. ii, p. 305.

men where they pass, and the society and friendship of those in all places, who are best and most eminent, and perhaps then other nations will be glad to visit us for their breeding, or else to imitate us in their own country." Milton on Education, p. 21.

It should be the particular care of those, who wish to turn their travelling to the greatest advantage, and to save considerable time and expense, to communicate their intentions of going abroad to some intelligent persons, who have pursued the same route, which they intend to take. It will be highly useful to obtain *written* instructions from them, as they afford more room for deliberate reflections, than mere oral directions admit of. The more time the traveller has previously bestowed upon acquiring a knowledge of the country he intends to visit, the better will he be qualified to ask proper questions on his arrival there; and the more nearly will he approach to the advantageous situation of him who has visited the country before.

Travelling at too early an age may be greatly injurious in its consequences. If the elements of literature and science are not acquired, when the mind is in the most ductile state, and the memory is most tenacious and retentive, a youth will never gain correct and accurate knowledge. On his return home, he will probably be engaged in business, or a constant round of society, and consequently will have little leisure to attend to the improvement of his mind. Having been early accustomed to wander from one object to another, and fond of displaying his superficial accomplishments, he will never apply himself to regular study; he will resemble the gaudy butterfly, rather than the industrious bee, which extracts sweets from every flower. He ought to go abroad a year or two before

he is expected to appear upon the stage of public life at home. By that time his disposition and general character may be ascertained, and his habits of thinking will in a great degree be formed. Having had some experience, and beginning to exercise his own judgment, he will not then be so dazzled with first appearances; nor will he esteem the productions or the manners of foreign countries excellent, merely because they have the recommendation of novelty, and differ from his own. He will not think every opera-singer a worthy object of his affections; nor will he regard every sycophant, whose address is insinuating, and whose professions of service are profuse, as a sincere and valuable friend. His morals will be less liable to be corrupted, and his fortune more secure from the insidious arts of parasites and courtesans. In Paris, Vienna, Brussels, and all other great cities of Europe, artful men and women lay innumerable snares to catch the raw and inexperienced; many of those young men, who resort too early to the continent, can fully attest their success; since from such improper and dangerous acquaintance, they frequently trace the loss of health and fortune, and the sacrifice of those wholesome prepossessions in favour of their own religion, country, and government, which were implanted in their early years. Hence too, when their minds are so susceptible of every impression, they take the stamp of foreign manners, and become deeply tinctured with frivolousness and affectation. "In general the man depends intirely on the boy; and he is all his life long what the impressions he received in his early days have made him. If therefore any considerable part of this precious season be wasted in foreign travel, I mean if it be actually not employed in

the pursuits proper to it, this circumstance must needs be considered as an objection of great weight to that sort of education." Hurd's Dialogues, vol. iii, p. 76.

To contemplate the face of nature, and examine the works of art, in different countries, agreeable and instructing as such researches may be, are far from constituting all the objects, which the traveller has to occupy his attention provided he takes proper advantage of the opportunities afforded to him of seeing and knowing the world. The display of manners is as much open to his researches, as the prospects of nature, or the cabinets of art. It is his important business to study mankind; and he cannot possibly apply to that study with success, unless he has attained a mature age; nor can he indeed gain a welcome admittance into respectable and improving company; for it is not reasonable to suppose that foreigners, distinguished by rank, abilities, or attainments, will be eager to converse with unpolished boys, just freed from school: they may however be gratified by the attention of those young men, who have knowledge to communicate, as well as to gain; whose curiosity is directed to proper objects; and who increase the reputation of their country by their ingenuous disposition, respectability of character, and propriety of behaviour*.

From the *expedition* with which some travellers proceed, we are not to conclude that knowledge of the world may be caught by a transient glance, or that they belong to that high order of genius, who can

* See Lord Essex's Letter to the Earl of Rutland, and that of Sir Philip Sydney to his brother, which contain some excellent advice to travellers. Seward's Biography, vol. ii, p. 358, &c.

"grasp a system by intuition." They might gain as much information if they were wafted over the continent by a balloon, as they acquire by viewing a country, during their rapid progress through it, from the windows of a carriage. The various places, through which they hasten, can only appear to them like the shifting scenes of a pantomime, which just catch the eye for a moment, and succeed so rapidly as to obliterate the faint impressions of each other. We are told of a noble Roman, who could recollect all the articles sold at an auction, as well as the names of the several purchasers. The memory of such volatile travellers ought to be of equal capacity and retentiveness, considering the few hours they allow themselves for the inspection of curiosities, and the short time of their residence in different places.

Ignorance of the modern languages, and especially of the French and the German, is a great obstacle to the improvement of many Englishmen, and prevents them from reaping the desired advantages from their travels. The custom is too prevalent of postponing any application to foreign languages, until a few months before the grand tour is commenced. The pupil is encouraged by the compliments of his teacher to flatter himself that a slight degree of attention to a few hasty lessons will produce extraordinary proficiency, and make him a complete linguist. From a knowledge of the customary forms of address, and the names of common objects, the French language is improperly supposed to be very easy to be acquired. No allowance is made for the variety of the irregular verbs, the idiomatic structure of sentences, and choice of words, the peculiar turn of fashionable phrases, or for the great difficulty of acquiring a just and correct pronun-

ciation. His deficiencies in all these particulars are too frequently apparent, as soon as the young traveller has crossed the Channel. After exchanging a few compliments, which he expresses in the formal language of his vocabulary, his conversation is at an end: his faltering tongue and embarrassed air discover that he labours with ideas, which he wants words to express. If he can arrive after much hesitation at the arrangement of a sentence, all the politeness even of a Frenchman is requisite to palliate his mistakes. Frequent attempts will without doubt produce fluency, and constant care will secure correctness; but the misfortune is, that the young traveller is too often employed in acquiring a knowledge of words and phrases when he ought to be improving his mind in social intercourse with those to whom he is recommended.

This defect in their education is a great inducement to Englishmen to associate too much with their countrymen, when they are abroad. Hence on reaching any of the great towns upon the continent, they are fond of forming parties among themselves, and are busy in prejudicing each other against the inhabitants of whom they know little from their own experience, and of whom they do not feel the laudable desire of knowing more. It is obvious that such conduct is calculated *to frustrate the principal end* of travelling, by increasing those prejudices, which it ought to remove, and by inducing the young traveller to acquiesce in the misrepresentations of others, who may pretend to give him a true description of characters and manners. As he has the opportunity of ascertaining these points himself, his own experience is his best guide. Should he continue to associate only with Englishmen, he will gradually so narrow the circle of his observation, as to

confine his attention to places, when it ought to be directed to persons; he will merely gratify his sight and neglect to improve his understanding; and will be conversant with pictures and public buildings, and a stranger to polite and well informed societies. "Without possessing the language it is impossible to appreciate either the genius or the character of a nation. Interpreters can never supply the defect of a direct communication. And without continuing a sufficient time, no traveller can form an accurate judgement: for the novelty of every thing around us naturally confounds and astonishes. The first tumult must subside, and the objects which present themselves *be repeatedly examined*, before we can be certain the ideas we have formed are just. To see well is an art which requires more practice than is commonly imagined." Preface to Volney's Travels, p. iv.

I will beg leave to recommend one example, that of Cicero, as a model for the conduct of travel. "He did not set out till he had completed his education at home; and after he had acquired, in his own country, whatever was proper to form a worthy citizen and magistrate of Rome, he was confirmed, by a *maturity of age and reason*, against the impressions of vice. In a tour the most delightful of the world, he saw every thing that could entertain a curious traveller; yet staid no where any longer than his benefit, not his pleasure, detained him. By his previous knowledge of the laws of Rome, he was able to compare them with those of other cities, and to bring back with him whatever he found useful either to his country or himself. He was lodged, wherever he came, in the houses of the great and eminent, not so much for their birth and wealth, as their virtue

knowledge, and learning: these he made the constant companions of his travels.——It is no wonder that he brought back every accomplishment which could improve and adorn a man of sense." Middleton's Life of Cicero.

Wherever the traveller may direct his steps the particular objects of attention will always have a reference to his inclinations, his education, or his future employment in life. He who goes abroad solely for his amusement, or merely to observe the fashions of the various places, deserves not the respectable appellation of a *traveller*, any more than the merchant, or the sailor, who traverses the ocean for the purposes of commerce. Those who properly come under this description are eager to make such researches as show their love of nature, science, and the great objects, which conduce to the comfort and ornament of mankind. Among such travellers we distinguish a *Banks*, who visited the confines of the southern hemisphere, to add new plants to the dominion of Botany; a *Shuckburgh*, who ascended the Alps, with undaunted perseverance to ascertain their altitude; a *Hamilton*, who explored Italy and Sicily, to survey and to preserve the precious relics of ancient art; a *Gray*, who, with true epistolary ease, and genuine taste, described every place and object so perfectly, as to set it immediately before the eye; a *Moore*, who has conveyed in the form of striking anecdote, the lively pictures of French and Italian manners; a *Young*, who, studious to improve the most beneficial of all arts, has described the state of agriculture in various climes; or a *Howard*, who, visiting the sick and the imprisoned of various countries, and zealous to alleviate their distresses, whether felt in the confinement of a dungeon, or the loathsomeness of an hospital, proved himself, by the labours and the

sacrifice of his life, to be a true friend to mankind. It is surely an honour, not only to our own country, but to human nature, that the spirit of curiosity should exert itself in such various directions; since new observations and discoveries have thus been made for the enlargement of knowledge, and the general benefit of society.

To tread on classic ground is a very pleasing source of gratification to the youthful traveller. He has it in his power to adopt the most direct method of illustrating the allusions to manners, customs, and places, found in his favourite authors, and to supply the defects of commentators and critics by his own actual observations. He who relishes the beauties of a Virgil, or a Horace, will be eager to visit the spots, either marked by their footsteps, or immortalized by their poems. What delight will he experience when he sees the Po flowing through the meadows of Mantua, and afterwards rushing by various streams into the gulph of Venice; or when he traverses the shores of Baiæ, and wanders amid the groves of Umbria! The Anio dashing its foamy surges through the craggy channels of the rocks, and the hills of Tivoli, interspersed with orchards, olive grounds, and cornfields, recal Horace and Catullus to his remembrance. These scenes ever endeared to learning and taste, inspired many of the lively and festive Odes of the one, and of the tender and pensive Elegies of the other.

Doubtless these and similar places may owe much of their beauty to the power of *description*; and actual observation may efface the rich and glowing tints of poetical colouring: yet still a prospect of the spots where heroes achieved their noblest exploits, or where the great poets, orators, and historians poured forth

the streams of genius, must afford exquisite pleasure to every cultivated mind. If the scenes they inhabited or described do not exactly correspond with the high expectations conceived from their works, yet such an actual survey will inspire the classical traveller with the most pleasing enthusiasm, give him lively images of the descriptions, which charmed his youthful fancy, and endear the objects of his early studies.

The effects likely to be produced upon the mind by such scenes are described with his usual strength of observation by Johnson, in his Tour to the Hebrides. "At last we came to Icolmkill. We were now treading that illustrious island, which was once the luminary of the Caledonian regions, where savage clans and roving barbarians derived the benefits of knowledge, and the blessings of religion. To abstract the mind from all local emotion would be impossible, if it were endeavoured; and would be foolish, if it were possible. Whatever withdraws us from the power of our senses, whatever makes the past, the distant, or the future, predominate over the present, advances us to the dignity of thinking beings. Far from me, and from my friends be such frigid philosophy, as may conduct us, indifferent and unmoved, over any ground, which has been dignified by wisdom, bravery, or virtue. That man is little to be envied, whose patriotism would not gain force upon the plain of Marathon, or whose piety would not grow warmer among the ruins of Iona" Tour to the Hebrides, p. 346.

His mind will be filled with admiration at the sight of the monuments of architecture. Rome sufficiently displays the extent of her pristine grandeur and magnificence; and proves, amid massy ruins, broken

arches, and prostrate columns, the justice of her pretensions to the title of the Empress of the world. The ruins of the Capitol, the solid and extensive public roads, and the monuments erected upon them to departed heroes; the Coliseum, which would contain vast multitudes in its capacious circuit; the Pantheon, perfect in its symmetry;

"Amid the domes of modern hands
How simply, how severely great!"

the Arch of Titus, rich with triumphs; the Column of Trajan, inscribed with the fairest forms of sculpture, may yet fill the astonished eye, and recal the great exploits of the past. The classical traveller will be diligently employed in tracing the remains of Herculaneum, Pompeii, and Pæstum, lately rescued from obscurity; and he will inspect with the greatest pleasure the numerous antiques deposited by the taste of the king of Naples in the Museum at Portici. Even where the lapse of time, and the ravages of barbarians, have almost entirely effaced the monuments of Roman grandeur, and places scarcely retain more than their names, he will explore with enthusiastic ardour the spots once distinguished by the splendid villas of Cicero and Adrian, and honoured with the tomb of Virgil, and while he surveys

"The wide waste of all devouring years
Where Rome her own sad sepulchre appears,"

he will not fail to indulge those melancholy yet edifying reflections, which are associated with sensibility and with virtue, upon the instability of human affairs, the insignificance of worldly grandeur, and the revo-

lutions of empires, in conformity to the disposal of divine Providence.

Nor will he overlook the modern specimens of architecture, scattered with profusion over Italy. He will survey the marble palaces of Genoa; the squares, fountains, obelisks, and palaces of Rome; and more than all, the sublime church of St Peter, rearing its majestic dome above all the surrounding edifices. Struck with this unparalleled monument of magnificent art, he will confess that the genius of Michael Angelo was alone capable of producing such a subject of perpetual admiration*.

In the places most distinguished by the productions of the great artists he will examine the finest specimens of sculpture. The gallery of the Grand Duke at Florence presents to his view numerous specimens of marble shaped into the most expressive and lively forms. The *Hercules* of the Farnese palace, the just image of strength united with activity, resting after the performance of some difficult exploit, displays his gigantic proportions, and sinewy limbs. The tragedy of *Niobe* and her daughters is represented in marble, and every figure which composes the interesting group expresses exquisite emotions of terrour and grief. In the palace of the Louvre may now be seen among no less than 208 inestimable specimens of antient art, a head of *Jupiter* brought from the Museum of the Capitol, in which the awful and placid

* The length of St. Peter's at Rome, on the outside, is 730 feet; breadth 520. Height from the pavement to the top of the cross, which crowns the cupola, 450 feet. The grand portico before the entrance is 216 feet long; 40 broad. The length of St. Paul's Church in London, is 500 feet; breadth of the cross aisles, from north to south, 248; height to the top of the cross, 356 feet.

majesty of the sovereign ruler of Gods and men accords with the descriptions of Homer. The *Mercury*, of parian marble, is remarkable for the easy inclination of the head, the mildness of expression, and the fine and vigorous turn of the limbs. Such is its perfect harmony of execution, that Poussin, the great painter, esteemed it the best model for the proportions of the human figure. The *Laocoon* of the Belvidere, discovered among the ruins of the palace of Titus, expresses in the figures of the Father and his two Sons the utmost violence of painful emotions. In vain they struggle against the attacks of the monstrous serpents which twine around them in spiral folds. The wretched Laocoon, with head upraised to utter the cries of despair, is expiring in the same agonies from which he has vainly attempted to rescue his dying children. But what language, what eloquence can do justice to the *Apollo of the Belvidere!* For three centuries since first found among the ruins of Antium has he stood the admiration of all beholders. Such is the beauty of his features, his grace of attitude, and the sublime mixture of agility and vigour, as to exceed all comparison with the fairest forms of individual nature. This collection will probably be soon farther enriched with that most perfect production of art, the *Venus de Medicis*, of which no model can convey an adequate image. This figure that *enchants the world*, gently bends her delicate form in the most graceful and modest attitude; beauty breathes its captivating animation into every limb, and the enraptured eye glides over the whole statue with unceasing delight and admiration.

The cabinets of the medalists call for his attention. There he traces the reigns of monarchs through suc-

cessive ages, and sees the images of heroes, statesmen, and beauties, whose various actions were the interesting subjects of his previous studies, in the collections of the Grand Duke at Florence, and in the national library at Paris. The gold and brass medals of the latter exhibit the elegance of Grecian and Roman art. He will be struck with the youthful beauty of Alexander the Great, the stern aspect of Galba, the martial steadiness of Vespasian, the crowned head of Zenobia, and the lovely profile of Faustina. He sees the emblematical figures corresponding with the reigning mythology of ancient times; abundance pouring forth mixed fruits from her horn; Victory waving her wings; and Honour encircled with a laurel crown. He fails not to notice the illustration which a series of medals afford to ancient manners, poetry, and history*.

The traveller qualifies himself for a constant source of entertainment by his fondness for the productions of the pencil. After having formed his judgment, by inspecting the best collections of which his own country can boast, he visits with delight the choice cabinets abroad, and tastes that refined pleasure which the incomparable productions of the best masters are alone capable of affording. The grand gallery of the Louvre enriched with the plunder of churches and palaces, will afford an ample field for the indulgence of his curiosity, as it contains nearly a thousand of the choicest productions of the Italian and Flemish schools. Upon all these occasions he will examine whether the artist has given to the marble, the gem, the brass, and the

* See Addison's Discourse on Medals, and Spanheim's very learned work, from which later writers have borrowed some of their best remarks.

canvass, a just representation of nature, passion, and beauty; and will be more attentive to general effect than to minute accuracy.

He will delight likewise to view the stores of literary productions, collected in public and private libraries: for there the wisdom, the science, the arts, and discoveries of successive ages, conveyed in the languages of all nations, are combined, and brought under one point of view. To him the Vatican and national Library of France will unfold their numerous treasures: there he may satisfy his curiosity, by inspecting the most ancient and curious manuscripts of the classic authors, the earliest and the most beautiful specimens of typography, and the choicest modern editions.

The *present* state of literature and of the arts will likewise call for his attention. He will examine how far a nation has risen above, or is fallen below its former condition; and in what respect it excels, or is inferior to others. He will inquire into the principal sources of its wealth and prosperity; for this purpose he must procure access to the statesman, the merchant, and the agriculturist, and from their reports derive just and accurate information. He will collect from their conversation the state of commerce and agriculture; and how far these sources of prosperity exceed in perfection and in extent those of his own country. He will also ascertain what are the particular religious and political establishments, the prevailing amusements,* remarkable customs, and what is their com-

* "In studying the character of a people, one inquiry should always be, what were their *amusements?* We here get hold of great features, which often unriddle the rest. This is indispensably necessary, where states have risen

bined and general effect upon the sentiments, manners, prosperity, and happiness of the people.

"In your travels these documents I will give you, not as mine, but his (the accomplished Sir Philip Sidney's) practices. Seek the knowledge of the estate of every prince, court, and city, that you pass through. Address yourself to the company to learn this of the elder sort, and yet neglect not the younger. By the one you shall gather learning, wisdom, and knowledge; by the other, acquaintance, languages, and exercise. This he effectually observed, with great gain of understanding." Sir Henry Sidney's Letters.

The traveller will moreover embrace every opportunity of enlarging his knowledge of the world, or in other words, he will turn his knowledge of himself to the greatest use, by ascertaining how far the image of others is reflected by his own disposition, propensities, and passions. His constant intercourse with society will afford the most favourable means for the exercise

to cultivation. In the finer tracts of the temperate regions of the earth you meet amusements that are elegant, and pleasures that are refined. Departing on either hand to the south, or to the north, you find taste to degenerate, and gratification to become impure. At length arriving at the extremities, refinement is utterly lost; to give pleasure is to stupify, or to intoxicate, here by opium, there by brandy and tobacco. The happy intermediate regions enjoy the *gyveese du sentiment*. Is the philosopher to set at nought these distinctions? Is he to lay no stress upon the different state of the arts? Is he to imagine it imports not that the peasant in Muscovy subsists on garlic, and solaces himself with ardent spirits; and in Italy that he feeds on a watermelon, and goes forth with the guitar on his back to the plough?" Robertson's Inquiry into the fine arts, p. 187.

of acuteness and discernment. He will not confine his observations to the exterior forms and superficial habits of society; but will endeavour to investigate the latent dispositions and characters of his associates: he will conclude that men, like books, are not to be valued for their outward appearance, or splendid dress, but for their intrinsic excellence. He will look through national peculiarities; he will pierce the veil of local customs, and endeavour to view mankind, as they really are, influenced by their general passions and dispositions. He will esteem those with whom he converses, rather for their moral worth than their intellectual powers; for their personal merit rather than their exalted rank, or dignity of station.

To every object he will not fail to direct such a degree of attention as is proportionate to its importance and utility. Whatever he thinks deserving his notice he will survey with an attentive eye; and the information he is eager to gain will be equally marked by its correctness and its extent. Convinced of the inestimable value of time, he will never be prodigal of the small portions of which it consists. He will be expeditious both in his movements and his remarks, but will not be precipitate in either. Ardent in his inquiries, but not frivolous or trifling, he will explore whatever is curious in nature or art with assiduity and diligence. In every place he will reap an intellectual harvest of its various productions, convey it to his own country, and make it the subject of pleasing recollection for the future years of his life, and the means of entertainment to his friends; and should he make any observations, which upon mature deliberation he may judge of sufficient importance, he will publish them for the general information of the world.

Thus the intelligent traveller will not fail to derive every advantage from his visit to foreign countries. On his return to his native shores his manners will be refined, but not formal; his dress fashionable, but not foppish; his deportment easy, but not negligent. Instead of importing the trifling fopperies of other countries, and displaying showy and superficial acquirements, as the substitutes for solid information and elegant accomplishments; and instead of endeavouring to excite the applause and admiration of the ignorant, by his exaggerated descriptions of distant places, and of his own extraordinary adventures, he will rather avoid every ostentatious display, as unworthy of his character and his sacred regard for truth.* His constitution, unbroken by vicious indulgence of any kind, will be invigorated by exercise, and his fortune will be unimpaired by extravagance. Scepticism will not undermine, nor bigotry contract, his religious principles. His prejudices in favour of his own country will rather be strengthened than worn away by extensive com-

* The traveller, especially if he has visited countries not commonly explored, would do well, both in his conversation and writings, to follow these remarks. "I have endeavoured to maintain the spirit with which I conducted my researches into facts; that is, an impartial love of truth. I have restrained myself from indulging any sallies of the imagination, though I am no stranger to the power of such illusion over the generality of readers: but I am of opinion that travels belong to the department of *history*, and not that of *romance*. I have not therefore described countries as more beautiful than they appeared to me; I have not represented their inhabitants more virtuous, nor more wicked, than I found them." Volney's Travels, preface, p. vi.

parison, and enlarged intercourse with mankind; and his general knowledge will be augmented through every pure and original channel of information. His philanthropy will be ardent, and his patriotism not less spirited than rational. His various acquirements and his engaging manners will render him not only the delight of his friends, but the ornament of his country.

CHAPTER IV.

THE PROFESSIONS.

THE topics which have been considered in the preceding chapters present a sufficient choice of interesting subjects of application to a student, who is desirous that the lights of useful knowledge may irradiate his mind from various points.

Should his fortune be sufficiently ample to exempt him from the necessity of following a profession, he will have more leisure to pursue his classical and philosophical studies. Having improved his relish for useful reading by requisite application, he will not be compelled to have recourse to rural diversions, or insipid amusements, merely because he is ignorant of any other method to employ his leisure hours. He may enlarge his acquaintance with instructive books, and derive a pure and exalted pleasure from his general reading. In his intercourse with the world he will soon be convinced that his attainments give him

great advantages over the vulgar and illiterate, that they qualify him to take comprehensive views of what is passing around him, and that they put him in possession of many *particular facts*, many *useful observations*, and many *general principles*, which may be applied with the best effect to his various concerns. In every stage of life he will experience the great advantage and satisfaction, which flow from an understanding refined by taste, cultivated by learning, and elevated by religion.

But the elementary parts of learning are most important, when considered as the groundwork of the professions. Few of these parts indeed can be said to be entirely unconnected with them; and there are none which do not communicate some important truth, annex some pleasing appendage, or supply some elegant ornament to improve, adorn, and complete the professional character. And it is the exercise of a *profession* which will enable a young man to render his attainments immediately instrumental to the good and happiness of others, as well as of himself.

If such be the advantages resulting from application to classical learning and philosophy, of what high importance is it to the student, to explore with circumspection, and cultivate with diligence, the extensive and pleasant field of general knowledge, previous to pursuing the more confined path of professional research!

As preparatory studies are advantageously combined with professional pursuits, so may they impart great assistance to each other. The physician renders himself more extensively useful in the course of his practice by some knowledge of the laws of his country, and the clergyman by his acquaintance both with me-

dicine and law.* And the occupation both of the physician and the barrister must ever, in the opinion of all well-disposed persons, be rendered more respectable by a uniform attention to the duties of religion.

In regard to the professions in general, it cannot surely admit of a question, whether the man, who perfectly understands the principles of his profession, and the branches of knowledge immediately connected with it, and who properly applies his various information, has not the greatest advantage over him, who, although possessed of superior abilities, has neglected the cultivation of his mind. Splendid talents are indeed the peculiar gifts of nature, and cannot be acquired by the greatest efforts of application, or procured by the most profound and extensive learning. But by the assistance of application and of learning alone splendid talents will be carried to their proper degree of improvement. And without them it is a fact warranted by experience, that the most brilliant parts will be of little use either to the possessor or the public.

I. THE PROFESSION OF THE LAW.

This profession is highly useful to the public, and may prove no less honourable than advantageous to the student, who conscientiously follows it. If he aspires to eminence at the bar, he ought to be blessed with a firm consitution, to enable him to discharge the

* Gisborne's Duties, vol. ii, p. 131. Percival's Medical Jurisprudence, p. 44. Blackstone's Comment. vol. i, p. 13.

duties and support the fatigues of his profession with ease and pleasure. His memory should be quick and retentive, his judgment clear and acute, his understanding sound and comprehensive, his religious principles firm, his moral character pure, his disposition benevolent, and his ardour for distinction not liable to be damped by difficulties, but in every stage of his career strong and unabating.*

When he considers the dignity and the importance of the study, in which he is engaging, in all its relations to general good, he will be deeply impressed with the profound sentiments expressed by the venerable Hooker, particularly in the following eloquent passage: "Of law there can be no less acknowledged, than that her seat is the bosom of God, her voice the harmony of the world, all things in heaven and earth do her homage, the very least as feeling her care, and the greatest as not exempted from her power, both angels and men, and creatures of what condition soever, though each in different sort and manner, yet all with uniform consent admiring her as the mother of their peace and joy." Ecclesiastical Polity, b. i, ad finem.

By contemplating the characters and perusing the works of the most eminent orators he will perceive to what an elevation the honour of the profession has been advanced; and, not to recur to the trite instances of ancient times, the examples furnished by a Lord Mansfield, a Sir William Jones, and a Lord Eldon,

* The character which Cicero has given of Hortensius, and the description of his own early studies, furnish excellent illustrations of this part of my subject. See Cicero de Claris Orat. sect. 301, 306, &c. Ed. Proust.

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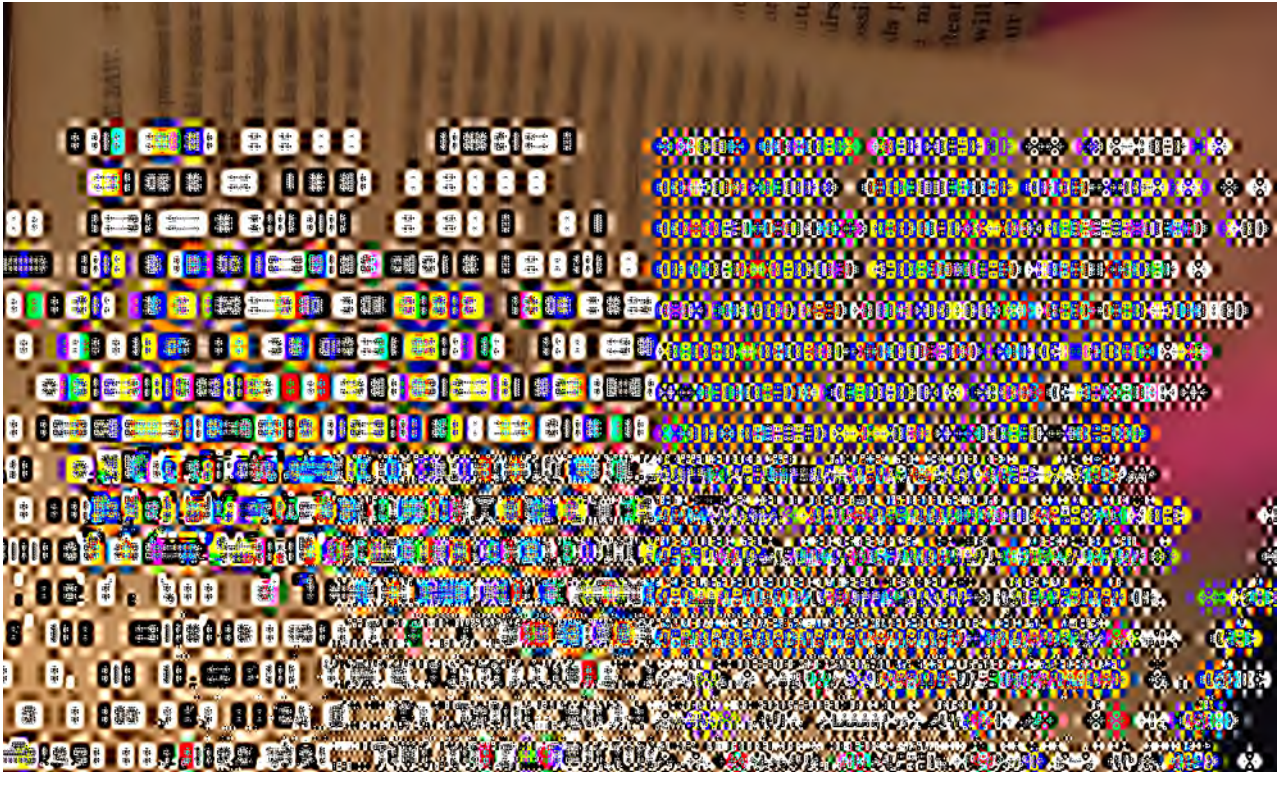
* Gisborne's Duties, vol. ii, p. 131. Percival's Med. Jurisprudence, p. 44. Blackstone's Comment. vol.



may be sufficient to stimulate his diligence, rouse his emulation, and show him what a degree of dignity, emolument, and fame may be reached by the united powers of talents and application, in a pursuit, which, above all others, is propitious to their exertions.

Of the great utility of his *early* studies he will be fully convinced, when he considers their connexion with the business of his profession. His acquaintance with general history will furnish him with a copious stock of examples, from which he may draw useful arguments, and reason by fair analogy. The detail of events, and the descriptions of the state of manners, in the different periods of our history, will serve as the best comments upon our laws, and will materially conduce to his understanding them fully, and explaining them with correctness.

He will be sensible how well calculated his logical and mathematical knowledge was, not only to furnish his mind with early nutriment, but with food adapted to his riper years. He will recognize their assistance in forming clear ideas, arranging them in due order, reasoning upon just principles, and deducing right conclusions. He will perceive that the mode which logic teaches is applicable to practice, that it enables him to strip the sophistry of antagonists of its disguise, and to detect the artifices of corrupt and fraudulent witnesses. His classical pursuits, and the literary productions of his own and other countries, will give compass, variety, and elevation to his thoughts, and elegance and copiousness to his language. They will supply illustrations to every subject of discussion, present various and pleasing images to his fancy, and diffuse an air of polish and correctness around all his forensic efforts.

"If therefore the student in our laws hath formed both his sentiments and style by perusal and imitation of the purest classical writers, among whom the historians and orators will best deserve his regard; if he can reason with precision, and separate argument from fallacy, by the clear simple rules of pure unsophisticated logic; if he can fix his attention, and steadily pursue truth through any the most intricate deduction by the use of mathematical demonstrations; if he has enlarged his conceptions of nature and art by a view of the several branches of genuine experimental philosophy; if he has impressed on his mind the sound maxims of the law of nature, the best and most authentic foundation of human laws; if, lastly, he has contemplated those maxims, reduced to a practical system in the laws of imperial Rome; if he has done this, or *any part of it*, a student thus qualified may enter upon the study of the law with incredible advantage and reputation. And if at the conclusion, or during the acquisition of these accomplishments, he will afford himself in the university a year or two's further leisure, to lay the foundation of his future labours in a solid, scientifical method, without thirsting too early to attend that practice, which it is impossible he should rightly comprehend, he will afterwards proceed with the greatest ease, and will unfold the most intricate points with an intuitive rapidity and clearness."*

The necessity of close application will be evident, when he considers the multiplicity of our laws, arising

* Blackstone's Introduction to his Comment. p. 32. Every young man will do well to peruse this excellent Introduction with attention, as it so clearly points out the *general* utility of an acquaintance with the laws of the land.

from the numerous rights of individuals, the various kinds of property, and the depredations to which it is exposed. He will feel his obligations to that learned and judicious commentator, who facilitates his progress and guides his steps through the intricate labyrinth of jurisprudence: and as the excellent work of BLACKSTONE, in which are so happily combined the principles of our municipal constitution with their origin and history, formed the basis of his elementary studies, so will it greatly assist him in the more advanced stages of his profession.

He will observe the proper application of laws to particular cases by attending the courts of justice; by this practice, steadily pursued, he will be enabled to collect a stock of valuable precedents for his own use. He will exercise his acuteness in unravelling the intricate circumstances of a case, and in separating truth from the mass of error and misrepresentation with which it is frequently surrounded.

When he comes forward to plead at the bar, he will display accurate information, aided by the powers of unaffected eloquence. He will be sensible of the charms of a graceful delivery, and of manly and appropriate action. Ever careful not to deviate from the subject in question, he will not injure his cause by tiresome prolixity, by too great an attention to minute circumstances, or an ostentatious display of knowledge.

In the course of private life he will endeavour to guard against those foibles, to which his profession may expose him. His manners will not be overbearing, his conversation will not take too deep a tincture from his mode of life and habits of study; and he will remember that the circle of domestic society is not the theatre for the exhibition of those *argumenta-*

tive talents, which are only displayed with propriety in the discharge of his professional business.

By the pursuit of such a line of conduct as is uniformly marked by uncorrupted integrity, true benevolence, and assiduous attention, the barrister will go forward with honour to himself, advantage to the public, and credit to his profession. Should he gain admittance into a higher sphere of eloquence, and serve his country as a member of congress, he will be sensible of the difference which subsists between the two situations, with respect to the persons whom he is to address, the subjects of discussion, the mode of conducting his arguments, and the forms of debate. He will therefore lay aside, when he comes forward as a member of congress, his technical language, and ingenious casuistry, and will determine the merits of a question upon broad and general principles, with reference to its true nature and real importance.

If his distinguished merit should point him out as a proper person to fill one of the executive departments of government, he will indulge with caution his honourable ambition, and consider well the motives which ought to influence him in declining, accepting, or resigning the station proposed, and not act under the influence of selfishness or vanity, at the expence of his conscience or his judgment. In accepting a high office he will be happy that the circle of his usefulness is enlarged, and that his opportunities are more frequent of displaying his talents in the noblest of all services, the service of his country.

By the bar are furnished those able and learned persons who are selected to preside upon the bench of judges. The prospect of such an honour may operate as an additional incitement to the application of the

barrister. But let him reflect that the integrity, diligence, and knowledge of him who aspires to this exalted station, are required to be pre-eminent. The welfare, good order, and due regulation of all ranks of the community are intimately connected with, or more properly may be said principally to depend upon, the qualifications of him who sustains one of the most important characters in the state, as the interpreter of the laws, the punisher of vice, the guardian of innocence, and the dispenser of justice.*

II. THE MEDICAL PROFESSION.

The profession of a physician has in all ages and countries been held in great estimation, by reason of its intimate connexion with the welfare of mankind. The cure of diseases, the restoration of health, and the continuance of life, are the objects to which the attention of the physician is directed: and he cannot fulfil his important duties, without possessing requisite knowledge, and exercising a due degree of judgment and sagacity. Destitute of the aids which books, lectures, and observations afford, he can never acquire the principles of physic, understand the structure of the human frame, develope the causes and the seats of disorders, and become acquainted with proper remedies to remove them.

* For a full account of the duties and qualifications of a lawyer I recommend a very valuable book titled Letters on the Study and Practice of the Law, 8vo. Editor.

He will apply not only to the public lectures, delivered by eminent professors in anatomy, chemistry, and the materia medica, but will examine with accuracy the various cases presented to observation by patients in the hospitals. There he will observe the different modes in which those unhappy objects are created, who labour under different diseases, as well as those, who are afflicted by various degrees of the same disorder. And he will remark with attention, and note with accuracy, the opinions given, and the particular observations made by the clinical lecturer.

A hospital opens the most extensive and useful field of observation to the medical student. It is the school in which he may learn the most instructive lessons, and train himself for his general practice. He may there follow every complaint through its various stages, and contemplate all the maladies of suffering man. There he may remark various experiments tried, new combinations of medicines formed, and new ingredients introduced into the materia medica. Giving way to feelings of humanity, he may learn to appreciate the life and the health of the poorer members of the community at their due value, and consider the importance of restoring them in perfect health to their families and their country.

"By thus frequenting the hospital he will see every moment some point illustrated, some doctrine confirmed, or some rule of practice established; at the same time almost every occurrence will serve to deepen the impression of those ideas, which it has been the endeavour of his teachers to imprint on his mind. He ought not to lose the least opportunity of acquiring clinical instruction. Clinical lectures are to the practice of medicine, what dissection is to anatomy—it is demonstration. By them disease is as it were embo-

died and brought before the student, as a subject for his leisure examination. By them the tutor is enabled to illustrate the nature of diseases; to teach their various differences by actual comparison of those which approximate in appearance, and to impress their several characters upon the mind of his pupil; to make him mark their growth and declension, to call on him to compare the ideas he has formed of disease with disease actually in existence, to render him conversant with the use of medicines, and with their various effects. He who engages in practice without this species of instruction must be supposed to know disease only by description; and when the fallacious appearances and variable forms which they assume are considered, it is to be apprehended that consequences too unpleasant to dwell on must succeed.*"

Medical men have been justly celebrated for their learning and abilities. To adduce no other proofs, many of the orations pronounced at the College of Physicians in London are as remarkable for purity of style as for solidity and ingenuity of observation.

The effects of medicine upon the human body are sometimes explicable upon mechanical, and sometimes upon chemical principles: an accurate and enlarged knowledge therefore of mechanics, chemistry, and physiology appears necessary for a physician, in order that he may understand the appearances of the animal economy, both in its sound and morbid state, and likewise explain the operation of remedies.

The science of botany is likewise useful, so far as it facilitates the knowledge of plants, by reducing them

* Parkinson's Hospital Pupil, p. 53, 56, &c.

into the most commodious system; and although it is not necessary for a physician to be acquainted with the name and history of every plant he may meet with; yet he ought not to be ignorant of any material circumstance relative to vegetables, either used in diet, or as medicines. The remarks respecting botany are equally applicable to every other branch of natural philosophy, and more particularly to the researches of comparative anatomy and general physiology. Gregory, p. 67, 75,

So much anxiety has been upon some occasions expressed to vindicate physicians from the imputation of infidelity and a disregard to religion, that it looks as if this charge was not entirely destitute of foundation. Perhaps their candour and moderation with respect to the different sects of christians may have been ascribed by the narrow minded to wrong motives; and those physicians who were in reality sincere believers, offended by the groundless imputations of scepticism and infidelity, have expressed themselves in an unguarded manner, and thus have given their enemies a pretext for raising a clamour against them. For the honour of the profession it must be observed that some of its greatest ornaments, Harvey, Sydenham, Arbuthnot, Meade, Boerhaave, Stahl, Haller, and Hoffman, have been distinguished by their piety and firm belief in christianity.

As the knowledge of diseases, their causes, symptoms, tendencies, and effects, constitutes the most important and difficult parts of professional study, the observations, which have been made by the most able and experienced physicians will claim the peculiar care of the student. He will read with close attention the curious dissertations of Stahl, the works of Boerhaave,

Hoffman, Sydenham, and Helmont, and thus will be furnished with lights to guide his inexperience, which are not accessible to the unlearned empiric.

To complete the ground work of his professional studies and observations he may repair to those places which are most celebrated for medical pursuits. But it seems to be a received opinion that London, from the skill and celebrity of the faculty who read lectures there, will render it unnecessary to visit other places. If he has sufficient leisure to extend the sphere of his observation he may visit Edinburgh, and those cites upon the continent most celebrated for medical pursuits and establishments. He may thus free his mind from too great predilection to particular theories, and local modes of practice. He will survey the cultivation of those branches of the art, which are imperfectly, or perhaps not at all regarded in some particular places. And thus he will collect a useful store of observations for the direction of his future practice.

He will not commence his medical career before his observations have taken an extensive range, his reading is well digested, and his judgment is mature. *Too great eagerness to begin his practice* may prove injurious to his reputation, and the source of his own future regret. Nothing seems so well calculated to establish his character as care and attention to his patients of whatever condition. A tender solicitude for their welfare, diligence and punctuality in visiting them, and the exertion of his best abilities for their recovery, will not fail to obtain their reward. Who has it so much in his power to make the sick man his warm and constant friend as the physician? If he be distinguished by mild and amiable manners a patient feels his approach like that of a guardian angel, who comes

to relieve his sorrows and remove his pains; while every visit from one who is of a harsh and unfeeling temper, depresses his spirits, and may increase instead of diminishing his malady. True sympathy will produce attention to many little circumstances, which contribute much to the relief of the patient; an attention which is above all price, and which, while it convinces the sick man of the goodness of his physician's heart, increases his regard for him, and raises the respectability of his profession. By diligent and careful exertions he will acquire the power of rendering the most important services to the public. He may very considerably extend his sphere of usefulness by superintending medical institutions, attending hospitals and dispensaries, and more especially by devoting certain portions of his time to the relief of the poor. To them his advice will prove of inestimable value; and his generosity in this respect will be repaid no less by their gratitude and the public approbation, than by the applause of his own heart.

The good physician will recommend himself to general patronage, regard, and esteem, by his skill, his benevolent disposition, and decorous deportment. In his treatment of the various diseases which come under his care, he will diligently attend to the different constitutions and different habits of life of his patients; he will follow nature with the closest attention through all her changes; he will watch every symptom, by which he can discover her tendencies and disposition, and will skilfully adapt his medicines to those symptoms, as they appear. He will recruit the exhausted powers of the constitution, strengthen the springs of life, and give them fresh energy and vigour.

Should he fail in his attempts, his want of success will be the fault of the art, and not of the practitioner.

In his common intercourse with the world, he will be distinguished by his general knowledge, and his pleasing and easy manner of communicating it. His attainments in literature and science will furnish him with the means of agreeable relaxation from his severer studies, and the fatigues of his profession.

To his patients he will be punctual and benevolent, and yet never be induced so far to sacrifice the principles of his duty to their humour, caprice, or timidity, as to relax in his recommendation of whatever he is convinced will conduce to their relief. Gregory, p. 182. To his competitors he will be liberal and candid; he will not indulge the asperity of opposition, nor the meanness of envy; and he will trust for emolument and reputation, not to petty artifice or indirect practices, but to the solid recommendation of a good character. He will indulge his benevolent feelings as a man, and conform to his principles of duty as a christian, by relieving the maladies of the poor: but he will never attempt to gain the patronage of the rich by unworthy services, or degrading concessions. In his general conduct he will prove, in the most extended acceptation of the word, the friend of mankind. He will show a becoming degree of condescension and affability to all, and will render the exercise of his profession equally the means of general good and of his own particular advantage and reputation. He will be convinced that these points cannot be secured by a narrow and selfish disposition, by a peculiar formality of dress and manners, or affected airs of importance and mystery. The true dignity of the profession can only be maintained by the superior knowledge and

abilities of those who follow it, by their liberal manners and conduct, and by openness and candour, which disdain all duplicity and artifice, all superciliousness and servility, and which require only to be known, to make their possessors the general objects of estem, respect, and honour. For those qualities which do credit to the medical character it is superfluous to have recourse to more particular description, as they can be fully exemplified in the lives of Radcliffe, Frend, Mead, Arbuthnot, Fothergill and many others, who hold a distinguished place among the sons of Esculapius, and adorn the biography of their country.

III. THE CLERICAL PROFESSION.

Of all the professions there is no one which includes such important duties as that of a clergyman. It is the immediate object of his labours to diminish the evils and increase the comforts of life, by inculcating the knowledge and recommending the practice of religion, and by preparing the minds of men for the happiness of a future life. As it is his duty to state and interpret the revealed will of God, to reclaim the vicious from their sinful conduct, comfort the afflicted in their distress, and confirm the good in the pursuit of virtue, it is not difficult to infer what ought to be his attainments and qualifications, and what his character and conduct.

Lamenting the levity and the indifference of some, who enter into Holy Orders, without considering the importance and respectability of their sacred office;

reprobating the selfishness and the wickedness of others who merely make it the road to wealth and luxurious indulgence; we will consider the case of a young man who is induced *by proper motives* to undertake the pastoral care, and who directs his studies and regulates his conduct in such a manner, as is consistent with a becoming and rational sense of duty.

He begins with considering the divine appointment of his profession, its serious nature, and its most important end. He observes the considerable portion of time and industry, which is devoted to the other professions, to the attainment of the elegant arts, and even to the most common occupations, in order to acquire a due proficiency; and therefore he concludes that a proportionable degree of application is necessary for his own, which justly claims the ascendency over them all.*

* "Si agnoscis dignitatem, da operam ut glorifices susceptam functionem; si difficultatem, abjice socordiam, & vigila; si periculum intelligis, cave ne declines ad dextram, sive ad sinistram: si præmium consideras, ne te pigeat ullius difficultatis. Quocumque verteris oculos, est quod excitet sollicitudinem tuam; si sursum aspicias, vides quis sit, qui tibi munus istud delegavit, vides paratum stipendium; si circumspicias quæ te circumstant, vides oves Christi tuæ concreditas fidei; si in te ipsum descendas, agnoscis quantam animi puritatem, *quantam eruditionem*, quantam prudentiam, quantum caritatis ardorem, quantam fortitudinem exigat ista functio, qua vel abstineas, si te cognoveris *parum instructum*, *vel ea fugere quibus est otium*." Erasmi Ecclesiastes, lib. 1. I know of no book better calculated to give a candidate for orders just and elevated ideas of his intended profession; to inspire him

Equally removed from indifference on the one hand, and enthusiasm on the other, he embraces his profession from a deliberate preference, and full persuasion that it will afford him more frequent opportunities than he could find in any other situation of life, to increase the glory of God, and advance the good of mankind. He is resolved to discharge his duties with zeal and diligence proportioned to their importance, and therefore cherishes such dispositions of mind as are best calculated to promote the great designs of his profession. He feels the most exalted and heart-felt satisfaction in performing all the offices of piety, and resolves to give, in every instance of his conduct, to his public and private instructions, the effectual recommendation of a good example.

At the commencement of his theological studies he will retrace the grounds upon which he has erected his belief in the fundamental truths of christianity. He will review the principles of natural religion, and consider the arguments for the being, attributes, and providence of the great Creator and Governor of the world. He will peruse the scriptures of the Old Testament, and will remark the intimate connexion which subsists between its leading circumstances, such as the fall of man, the types and institutions of the Mosaic Law, and the regular succession of prophecies,

with a fervent, yet temperate zeal in the exercise of it; or that can supply better rules for the composition of his discourses, than the *Ecclesiastes* of Erasmus, from which this excellent passage is borrowed. The whole subject, expressed in easy and elegant latin, is treated with great spirit. It is much to be regretted, that Erasmus was prevented by bad health from finishing this excellent work, in a manner agreeable to his wishes.

with the great scheme of redemption developed in the New. He will review the external and internal evidences of christianity, and examine all the proofs in such a manner as not only to be fully convinced himself of the truth of revelation, but so as to be furnished with such stores of information, and to acquire by study and meditation such ease in the application of them, as to be ready, upon all proper occasions, to oppose the cavils of the sceptic, the infidel, and the sectarist, by giving, in compliance with the advice of the inspired apostle, " an answer to every man that asketh him a reason of the hope that is in him." 1 Peter iii, 15.

Unless his belief be founded upon *conviction*, and be the result of his own careful examination, is he not liable to be lulled into a criminal indifference, shaken by the assaults of false philosophy, or deluded by the visions of enthusiasm? In the situations in which he may be placed, in company with the infidel, the sceptic, or the scoffer, or with christians of various denominations, he will possess none of the requisite stores of knowledge, by the assistance of which he may discover the artifice or the ignorance of his opponent, and render his attacks ineffectual; he may be silenced, may be disconcerted, and may expose himself and his profession to disgrace and ridicule, unless he be firmly grounded in all the important points of christian knowledge.

The studies of his riper years will derive peculiar advantage from the progress he had previously made in polite literature and the sciences. By his knowledge of the Greek language he will be enabled to read the New Testament in the original with ease and pleasure. Thus will he be well versed in that book,

which is the sacred repository of the words and actions of the redeemer of mankind; the unerring guide of life, and the pure source of all his instructions. He will peruse it with a critical view to the particular style of each Evangelist, the idiomatic and foreign forms of expression, and the particular allusions to ancient manners and customs. He will be careful to compare one passage with another, and thus will illustrate the general meaning of the sacred writers. He will call to his assistance the works of skilful commentators and critics, to enable him to see clearly the application of every parable and illustration, to explain difficult terms, and to follow to its full extent the chain and connexion of argument. "Let him carry on his researches with a pious, humble, teachable, and impartial spirit, guarding against preconceived opinions hastily adopted, against bigotry for particular systems, blind prepossessions in favour of a particular interpreter, and the prejudices of habit, of his place of education, or study of his relations and friends, and of his expected patrons. To earnest prayer for the superintending guidance of the Supreme Being let him join his own assiduous exertions, and follow the path of truth, whithersoever it may lead him." Gisborne, vol. ii, p. 11.

From his previous attention to logic and the elements of the sciences he will reap an advantage similar to that which is enjoyed by a student in the law. They will instruct him in the methods of clear and conclusive reasoning, and in following arguments by regular steps to the discovery of the truth for which he searches. He will however consider the particular species of evidence which belongs to divine revelation, and will carefully mark the difference between history

which depends upon *testimony*, and science which is built upon *demonstration*. He will be careful not to confound the different modes of investigating truth, nor will he indulge a fondness for inquiry into metaphysical refinements, or subjects of abstruse speculation, which have no tendency to promote piety, or advance the interests of morality. Far from indulging in a cavilling disposition he will be fully satisfied with those plain, direct, and positive evidences of revelation, which carried conviction to the minds of a Newton, a Barrow, a Pearson, a Clarke, and a Paley.

The historical part of his studies will open a wide field to his observation. He will make himself well acquainted with the events and actions recorded in the Old and New Testaments, will trace the resemblance subsisting between the traditions and mythology of the Pagan world, and the details of the sacred narrative of Moses; he will illustrate his researches by reference to those authors who have investigated the subject of Jewish and Christian antiquities. He will apply the principles of sacred criticism to the external evidences of scripture, examine the particular age of the author of each book, the purity of the text, and the condition and value of the most approved manuscripts; and thus will ascertain the authenticity of all those writings which compose the canon of the Old and New Testaments.*

The perusal of *sermons* will be found to merit considerable attention. By their assistance the student will with ease increase his stock of theological know-

* For useful remarks on preparatory studies see Erasmi Ecclesiastes, lib. ii.

ledge, gain the explanation of many difficult passages of scripture, and see subjects discussed with peculiar ability, and placed in various points of view. And surely no less satisfaction than improvement will result from his application to those discourses, which display the rich eloquence of Barrow, the simple energy of Tillotson, the solid sense of Sharpe, the animated descriptions of Sherlock, the perspicuity and close argument of Clarke and Powel, the pregnant brevity of Ogden, the precision of Secker, and the beautiful imagery of Seed and Tottie.

Such writers will improve his ideas of theological criticism, and render him important service, when he proceeds to the composition of sermons. They will assist his conceptions of his subject, and give exactness and arrangement to his thoughts. They will set before him a variety of arguments, expressions, and illustrations, and furnish numerous hints, which he may apply to his own immediate purpose.

When he proceeds to *the composition of sermons*, he will reap the advantage of his previous attention to the beauties of language. He will then be sensible of the benefits arising from the perusal of works of criticism, and the cultivation of a pure taste.

The style of a young divine must depend upon the condition of his hearers; if they be of the common class, let him imitate the manner of Wilson and Burder: if they are of a superior rank, Atterbury and Sherlock may be proposed as excellent models of composition. His arguments ought to be concisely stated and clearly expressed, his divisions few, and his discourses directed rather to the reason than the passions of his audience. He may be allowed sometimes to indulge in figurative ornaments, as they will give light,

elegance, and spirit to his sermons. Pompous phrases, learned quotations, and remote allusions ought carefully to be avoided, as they injure the unity and simplicity of a discourse, and are more calculated to place the writer in an ostentatious point of view, than to familiarize his subject, or edify his hearers.

The perusal of the sermons of others ought rather to stimulate industry than encourage idleness. In appropriating them to his own use he will show his judgment by selecting the best topics, and adapting them to the situations and circumstances, errors, doubts, prejudices, vices, and spiritual wants of his own congregation. He will be sensible however that the assistance he borrows from others is weak in comparison with what he derives from his own mind; and that the instruction which flows from his own heart, his own reflections and observations, will not fail to make the deepest impression upon his hearers, which is the great and important end of the labours of the pulpit. Another encouragement to composition arises from considering, that by practice the difficulty of writing will be gradually lessened, and that the writer will in time be no less surprised than pleased by discovering how much in a few years his later sermons surpass his first attempts.*

With respect to the mode of delivering a sermon, it may be observed, that the advice of a judicious friend, as to the management of the voice, and the propriety of gesture, will be of much more use than volumes of instructions. These can no more lead

* Read an excellent letter written by Dr. Johnson to the son of a friend on taking orders. Seward's Biograph. vol. ii, p. 602.

to perfection than studying the most exact theory of music can enable a reader to play well upon an instrument, to which end application and practice can alone conduce. In like manner a good delivery must be the effect of repeated trials. Precepts may improve the judgment, but will give little aid to the power of performance; they may form critics, but cannot make speakers.*

The principal fault attributed to the divines of the church of England is, that they are remarkable for a cold and inanimate mode of delivery. This circumstance points out the advantages, which formerly arose from the custom of preaching without the assistance of a written sermon. The preacher then gave way to the current of his own thoughts, and expressing himself as in animated conversation, transfused, without any diminution of their heat and strength, his own sentiments into the breasts of his hearers.

Impressive as this practice certainly was, yet it may be remarked, that the present mode of delivering sermons has peculiar advantages. Sermons by the help of reflection are more correctly composed, with reasoning more just, instructions more judicious, points of faith and doctrine more fully and truly explained, and what is of great importance, with more regularity and method. As the divine of the church of England is by custom confined to one method, he should study to improve it as much as he can. As that extemporary discourse, which approaches the

* Lawson's Lectures on Oratory, p. 411. &c. This author merits the particular attention of every young clergyman.

nearest to a written sermon in regularity of composition, and purity of style, is the best; in like manner among the written sermons, that is undoubtedly most excellent, which is composed with the easy air, and pronounced with the unaffected warmth and fluency of the extemporary.

Nothing is so impressive, or tends so much to the attainment of excellence, as the sight and the contemplation of living example. It is much to be lamented that we have no *public school of eloquence for the instruction of young divines*, in that species of delivery which is necessary to give pathos, dignity, devoutness, and spirit, to their mode of performing the various services of the church—in the reading desk, the pulpit, at the baptismal font, and the altar. Until such an institution be established, we must refer to those, whose practice requires only to be generally known to be highly admired, and zealously followed. Happy are they who have an opportunity to be edified in the performance of the sacred services, by the emphatic correctness of a PORTEUS, the solemn tones and impressive dignity of a PARR, and the devout, judicious, and unaffected elocution of a MALTBY. Were the public duties of piety thus generally performed throughout the nation, is it not probable that the crowds, which now fill the conventicles of sectarists, would resort with eagerness to their respective churches, and, attracted by the manner of celebrating the service, would enjoy the additional advantages of solid and truly edifying instruction?

Should the young divine be resolved to make the greatest improvement of his time, he will discover that the occupations and the active duties even of a parish priest are not incompatible with his studies.

He will accordingly remain contented with those attainments, which enabled him to obtain Holy Orders. He will devote a considerable share of his leisure to add to the stock of his learning, and make his application no less a matter of inclination than of duty. "Literature, and sacred literature in particular, is requisite to a clergyman, not only as it is necessary to the edifying discharge of his pastoral duties, but as it forms and shows the turn of his mind, influences and implies his habits of life, fills up his time, makes him happy at home, detains him from pursuits improper in kind, or excessive in degree, or keeps his mind in a due tone for every work of his ministry. *In every view it is a vital part of his character.*" Dr. Napleton's Advice, p. 84.

As the opinions of mankind have varied in all ages respecting the interpretation of the truths of revelation, he will observe that controversial writings form a considerable part of theological studies. He will therefore take a general view of the most remarkable controversies in their chronological order, and trace their origin, progress, and effects. He will remark that in the earliest ages of the church the apologists were obliged to defend the faith against the bigotry of the Jews, and the idolatry of the Heathens; that at the Reformation the protestant contended with the superstitious advocates for popery, and that in the present age a divine must resort to the ancient weapons of orthodoxy, to oppose the advances of heretics, who corrupt, and of infidels, who deride the faith. He will therefore furnish himself with those arguments which may be opposed with the best effect against the errors of his wn times. While however he is prepared "earnestly to contend for the faith," and is never regardless

of his solemn engagements, to maintain the "good fight," he will remember that the weapons of his warfare are spiritual, that it is his duty to promote his cause by tempering his zeal with candour, by opposing moderation to violence, and charity to malice; and that all rancour, prejudice, and personality, ought to be banished from discussions, which have the glory of God and the establishment of truth for their momentous objects.

And mindful of the sacred promise which he made during the ceremony of ordination, he will be diligent in reading the holy Scriptures, and the lives of eminent and pious men; and thus he will cherish a devout frame and temper of mind, and increase his relish for spiritual pleasures. His studies will assist and give vigour to his professional occupations; they will draw off his mind from the levity, folly, and selfishness of the world, and make him regard with proper indifference the occupations which consume the irrevocable hours of the idle and dissipated. They will keep in his view the bright examples of the patriarchs, prophets, and apostles, and of his divine master himself. They will confirm his faith, increase his zeal, and encourage him to run the race of duty with unremitting activity and perseverance, whether he obtains the dignity of a Prelate, acquires the competency of a Rector or Vicar; or even continues through life in the humble yet useful sphere of a country curate*.

*—"Apud Deum major est dignitas ejus qui quamvis pusillum & humilem gregem bona fide curat, quam qui gemmatis coronis, pedis aureis, reliquoque strepitu sese venditant. Audi igitur pastor exigui rusticanique pagi, agnosce dignitatem tuam, non ut intumescas, sed ne muneris tui gloriam rerum humiliorum admixtu contamines.

To the call of active duty he will be ever attentive. Anxious to prove the efficacy of his holy religion at a time when suffering humanity asks most earnestly for his aid, he will not avoid, or rather he will be anxious to visit the bed of sickness. He will endeavour to compose the anguish of mind and the perturbation of spirits, during the dreadful visitations of disease, and the pains of expiring nature. He will express, from deep conviction of the divine energy of his holy faith, the language of consolation, and speak peace to the troubled soul. He will convince the sufferer of the necessity of a Redeemer, and display the blessings of his gracious promises: he will endeavour to raise his mind above the sorrows of the world, and fix his attention upon those sublime and permanent enjoyments which lie beyond the grave, and are centered in a blissful immortality. Thus will he support the true dignity of that religion, which can best instruct mankind to bear pain and sickness with fortitude, and to resign their souls to death with composure, and even with gladness.

A *pious*, *learned*, and *diligent* divine is one of the strongest supports and brightest ornaments of his country. In his general intercourse with mankind, while he maintains his dignity, he is free from formality or moroseness; enjoys society, but avoids its dissipation and its follies, and knows the value of time too well to sacrifice any very considerable share of it to mere amusement. To those who differ from him in reli-

"Non refert quam numerosus aut splendidus gener tibi obvenerit, sed illud refert, ut pro sorte credita Domino fœneratori tutum adferas. Nec tam spectato quid commissum sit, quam qui commiserit." Erasm, Eccles. lib. 2.

gious opinions he shows firmness of principle without asperity of conduct, as he is ever mild, gentle, and tolerant. He warms the hearts of his flock, by his fervent and unaffected piety, and enlightens their understandings, confirms their faith, and invigorates their practice by his judicious and impressive discourses. In his private admonitions he is diligent in giving advice, and delicate in his manner of doing it; always considering whether the means he employs of reconciling animosities and reproving vice are best calculated to answer the proposed ends. He maintains a proper intercourse with all classes of his parishioners, but is neither arrogant to the poor, nor servile to the rich. To the indigent and deserving he is a constant friend, and protects them from the oppression of their superiors; he relieves their wants as far as it is in his power, and reconciles them to their laborious and humble stations by the most earnest exhortations to patience and contentment. He is the composer of strife, and the soother of outrageous passions, and no less the temporal than the spiritual minister of peace. His family is the model for all others in their attention to private and public duties; he is the general object of esteem to all, except the malignant and the envious; and he has the happiness to observe that, as he advances in life, the respectability of his character gives additional efficacy to his instructions, and both increases the honour and promotes the diffusion of his holy religion.

"The imagined presence of a wise and good man has been recommended as a convenient guard to private conduct. How would this thought or action appear to Socrates, or Plato, or Aristides? The parochial minister may with equal advantage suppose the ocular inspection of his spiritual Overseer, and antici-

pate with greater feeling his censure, or his approbation. If the fear of solitude, or vanity, or idleness, should draw him from the scene of his duty to the provincial town, to the camp, or the capital, he may seem to hear the voice of his elder brother—*With whom hast thou left those few sheep in the wilderness?* The reproach may possibly vibrate in his ear, till it rise to the expostulation of a higher Friend and Monitor—*Simon, son of Jonas, lovest thou me?* Happy is the clergyman who, under the impulse of all these motives, discharges with unabated diligence, the sacred, useful, honourable office of a parish priest; and blessed is the congregation who receiveth and heareth him with a grateful and attentive mind." Dr. Napleton's Consecration Sermon, p. 107.

The day will come when the Son of God himself the great Teacher of Christianity, will appear to judge the world in righteousness. His minister, who has thus been *an example in word, in conversation, in charity, in spirit, in faith, in purity, who hath taken heed unto himself and all his flock, over which the Holy Ghost hath made him overseer*, may then meet his congregation in pious hope that his labours, through the mercy of an all gracious Redeemer, will be accepted; and what tongue can describe, what imagination can conceive the ecstatic transports of him, who, *because he has turned many to righteousness, shall shine as the stars of heaven forever and ever*, and shall be welcomed to the realms of eternal glory with these gracious expressions of acceptance, "WELL DONE, GOOD AND FAITHFUL SERVANT; ENTER THOU INTO THE JOY OF THY LORD?" 1 Tim. iv, 12. Dan. xiii, 3. Matt. xxv, 21.

THE CONCLUDING CHAPTER.

THUS have I endeavoured to execute my proposed design, by sketching the outlines of general knowledge, and opening the various prospects of Religion, Learning, Science, and Taste to the young and studious reader; and in the discussion of every subject I have omitted no fair opportunity *of endeavouring to strengthen the ties of genuine patriotism, and to increase his zeal for the service of true religion.* My plan would however be incomplete, were I to conclude this work without subjoining a few considerations, which will be stated with more freedom, and urged with greater earnestness, because they have not been sufficiently insisted upon by the numerous writers upon these subjects, although I am sensible, from long experience and attentive observation, that they are of the *highest* importance.

To all who feel a proper regard for the dearest interests of society, *education* must appear to be a subject of the most serious concern, as it has the most powerful influence in forming the character, inculcating the principles, and promoting the happiness of the rising generation. And such are the *peculiar circumstances* of the *present times*, and the numerous and unprecedented dangers to which young men are now exposed, that it can hardly be questioned, whether there was ever a period in our history, when *greater docility* and *obedience* were necessary *on their part; greater circumspection* on the part of *their parents*; or *greater diligence*, aided by all the advantages of learning and experience, on the part of *their instructors*.

Writers of eminence and respectability, who were remarkable for their accurate observations upon the conduct of mankind, have drawn very gloomy pictures of the depraved manners of the last century. Berkely, the celebrated bishop of Cloyne, and Hartley, the ingenious author of the Observations on Man, did not hesitate to attribute much of this national degeneracy to neglect in the conduct of education, particularly among the higher ranks of society. But had these writers lived in the present times, can it be seriously asked, whether they would have found no additional subjects for their complaints? or rather would they not have apprehended that greater and more alarming dangers than those which impended over their contempories, would arise from the prevalence of evils now existing?

Such conjectures are confirmed by those authors who have recently remarked the various and considerable changes, which have taken place in the opinions and the conduct of their contemporaries.* "In consequence of the tide of wealth, which our extensive commerce has caused to flow into this country, the luxury and dissipation of the higher orders of society have reached an unprecedented height; while the public opinion of high birth and hereditary honours has sunk far below their former estimation. The rage for public amusements, and for crowded assemblies of persons of fashion, who meet for no purpose but to destroy time, and encourage the selfishness of gaming,

* See Mrs. H. More on Female Education; Bowdler's Reform or Ruin; Bowles's Reflections on the State of Society; Mrs. West's Letters to a Young Man; and Dr. Barrow on Education.

has gone far to extinguish their domestic pleasures, and to banish rational and refined conversation. The distinctions formerly preserved among the different ranks, which were once reputed the great preservatives of decorum and order, are now neglected as unnecessary, and ridiculed as formal. The doctrines of liberty and equality are not confined to speculators on government, or political declaimers alone, but are introduced into common habits of thinking, and general modes of acting: among other mischiefs to which they have given rise, they have increased the self-sufficiency of young men, encouraged the indulgence of their passions, flattered their vanity, led them to regard government of every kind as tyranny, religion as superstition, and the laws and regulations of all former ages as incompatible with the rights of their nature, and unworthy of the dignity of their understandings. The general reverence for the experience of age and for the privileges of authority is greatly diminished, and this change of opinion and laxity of principle are observed to be in no instances more conspicuous than in the relaxation of parental authority, the indulgence of the appetites and inclinations of the young, and the confident manners, and sometimes the open disobedience of children to their parents."

Such are the most striking characteristics attributed to the present times; and whether the description be allowed to be precisely accurate, or only partly just, it is our earnest desire, as well as our urgent duty, even supposing that a relaxation of principle, an immoderate pursuit of pleasure, and an impatience of authority and restraint have not yet pervaded any considerable part of the community, to sound the alarm of approaching danger, and to point out the best

means of counteracting such enemies to our present peace and future happiness.

Awakened therefore by apprehensions of mischief so threatening to the morals of the young, unless vigorous measures are adopted to prevent it, and prompted by no motive, except that which the love of my country inspires, let me be allowed to address my final exhortation upon this momentous subject to those to whose especial service my present labours are devoted. Let me calmly remonstrate with such as have already imbibed the principles of the *new philosophy*, but have not drank enough of its pernicious draughts to be wholly intoxicated; and let me caution those whose lips are yet pure and unsullied by its taste, before remonstrance may be fruitless, and all caution vain; and let me earnestly entreat them all, if they have any due regard for their own comfort, respectability, and happiness, to listen to that sound and salutary advice, which will not only diminish the labour of their teachers, but augment the pleasures of knowledge, and give due efficacy and success to the *established* modes of education.

The great objects more immediately requisite for young men to attend to are, PIETY TO GOD—OBEDIENCE TO PARENTS—THE IMPROVEMENT OF TIME—the DILIGENT PURSUIT OF THEIR RESPECTIVE STUDIES—and an IMITATION OF THE VIRTUOUS AND HONOURABLE CONDUCT OF THEIR ANCESTORS—such will prove the best and the most effectual preservatives against the reigning evils of the times, the vices of libertinism, the sin of infidelity, and the folly of innovation.

I. Let me recal your attention to the first and the most important part of my work, and conjure you,

my young reader, by the most affecting considerations which can influence the mind of man—by your reverential awe of your great Creator—by the regard you owe to your immortal soul—by your solemn professions as a christian—by your ardent desire of comfort in this world, and of happiness in the next, to adhere with inflexible firmness to your religious engagements. Prove your belief in the truths of christianity, the evidences of which you have examined, and to the rewards of which you aspire, as the most sublime objects of all human ambition, by your conformity to the institutions of the established religion of your country. Keep alive the holy flame of fervent and unaffected piety by the practice of *private*, as well as *public* devotion; and never let the sun begin his daily course without recommending yourself and your friends to the protection of the great Author of your being, the Giver of every blessing you can hope to enjoy. Be devout without ostentation, and religious without hypocrisy. Remember that devotional exercises are recommended by the concurrent voices of all nations, that they are particularly enjoined by the precepts of our holy religion, as the most effectual means to maintain that spiritual intercourse between man and his Maker, which is the highest privilege of rational beings. Recollect that prayer is a preservative against the allurements of sin, and the snares of temptation; that most acceptable in the sight of God is the sacrifice made by innocence; and that "the remembrance of your Creator in the days of your youth," conducive as it is to the support of faith, and the performance of duty, will prove a source of the most elevated hope, and the purest joy, throughout every period, and amid every trial of your life.

II. FILIAL PIETY is the prime affection of the soul, and one of the most sacred and important of all social relations. It is the voice of nature, sanctioned by the authority of reason and revelation, and derived from the best and purest feelings of the heart. Consider that its violation was always regarded, by the wisest and most enlightened people, as the most flagrant breach of morality, and therefore was punished with the severest rigour. Reason fully justifies the principle upon which the laws of the Jews, the Romans, and the Chinese, against refractory and undutiful children were founded; for filial disobedience is a sure mark of that insensibility, as well as of that ingratitude and injustice, which have a direct tendency to a violation of order and the commission of crimes. Filial love, on the contrary, is the certain indication of such an amiable temper, as will display itself with uniform benevolence in all relations, in which hereafter as a man you will stand to society. It is the root of the most endearing charities; its branches are vigourous, and will bear the most precious and the most delicious fruit. There is the best reason to presume that an affectionate son will become an affectionate brother, friend, husband, and father. When arrived at the age of mature reason you will be sensible that the restraints formerly laid upon you by your parents were the effects of true regard, intended to shield you from evil, not to debar you from good, to guard you from danger, not to contract the circle of your pleasures, for the sake of asserting authority, or displaying power. Let, therefore, no foolish vanity, no levity or caprice of temper, no arrogance, arising from superior fortune, or the consciousness of superior or more fashionable accomplishments, so far possess your mind, and blind

your understanding, as to induce you to treat your parents with inattention or disrespect. Always remember that your duty to them is inferior only to that which binds you to the great Author of your being; and that neither the implicit submission of childhood, nor the return of affectionate offices in more advanced age, can ever cancel your obligations for a *father's protection*, or repay the solicitudes of a *mother's tenderness*.

In the practice of filial obedience attend more particularly to *one* instance of it, which seems to be highly reasonable, and strictly expedient. I allude to the *choice* of a *profession*. Your parents have an undoubted right to decide for you; and their experience and knowledge of the world may be fairly presumed to lead them to such a determination as is most proper and advantageous upon the whole. Be not influenced in a concern so highly conducive to the happiness of your life, by a predilection, founded upon your own caprice, or the taste of your companions, when the decision ought to be made with reference to your peculiar temper, circumstances, and abilities, of which you, from your tender age and inexperience, must necessarily be an incompetent judge. When you mix with the world you will behold the unhappy effects of persons having been brought up to employments, for which neither nature nor education have fitted them; you will remark instances of professional men, who are neither diligent, studious, nor serious, and who have no *professional* zeal, and are therefore constantly liable to the ridicule of their friends and the censures of the public, by acting out of character. Should you be admitted to their confidence, you will hear them lament that they were the victims of their own choice,

or of some consideration, which had no reference to their abilities, or their dispositions. You may observe that, as the pursuits of life are various, a sphere of action may be found suitable to each particular turn of mind. To the bold and the enterprising the army and navy present opportunities of exertion; to the serious and contemplative the church; to the acute and aspiring the law; and to the diligent and persevering the various occupations of the merchant. Let not your pride, or your vanity, be suffered to take the alarm, and create prejudices against any situation which is advantageous and respectable. Judge not by specious appearances, but attend to all the benefits it may secure to you in the course of your life, and the rewards which it may bestow upon your care and assiduity. When you have once been directed to make a judicious choice, let no caprice induce you to repent of your option, no unsteadiness relax your diligence; persevere with constancy in the path to which experienced guides have conducted you; and be assured that steady and unremitting exertions will be rewarded by adequate success.

As the mild suggestions of parental advice gradually succeed the controul of that authority which was adapted to your weaker years, improve the intimate connexion by unremitting assiduity, and unreserved confidence; and qualify yourself to be the most agreeable associate of your parents. And if, as they sink under the weight of years, you derive a pleasure from alleviating their pains, and soothing their infirmities, the tie which will bind you to each other's hearts, will be love inexpressible, formed from the first emotions of your sensibility, and strengthened by length of time, and the constant reciprocity of affectionate offices.

III. Reflect that time pursues his flight on rapid wings, and that the hours of youth, like the waters of an impetuous stream, roll on never to return. You must be sensible that the portion of life appropriated to your education is not, if duly considered, a season for pleasure and pastime alone; that the days will come, when you will have no leisure from the engagements of the world to increase your stock of knowledge by study, and to improve by regular application those talents which Providence has committed to your care, for the use of which you are accountable to conscience, to society, and to Heaven; from the abuse and neglect of which will spring sad regret and unavailing sorrow; but from the cultivation of which will arise the delights of a self applauding mind, and the respect and honour of the virtuous and the wise.

Do you enjoy the distinguished privilege of being a *member* of one of the *Universities?* Whether your destination has led you to the abodes of learning and science, which adorn the banks of the Isis, or the Cam, in whatever academical rank you may be placed, fail not to improve every opportunity, and to seek every means of acquiring knowledge, afforded by tutors and professors; cultivate the acquaintance of the learned, the accomplished, the serious, and well disposed; disregard the solicitations of the idle, and resist the allurements of the dissipated, the intemperate, and the irregular, who may urge you to drain the bowl of intoxication, and transgress the bounds of discipline. Look to the *result* of their misconduct, and you will remark that, far from affording any true pleasure to an ingenuous mind, it terminates in disgrace, punishment, and ruin. Frequently meditate upon the actions, and familiarize yourself to the works of the great and the

good, who have inhabited the same mansions of learning, trodden the same paths, and experienced the pleasures of solitude, or social converse, in the same delightful gardens and groves. Let the classic scenes once honoured by a MILTON and a DRYDEN, a PEARSON and a TILLOTSON, a NEWTON or a CLARKE, a LOCKE or a CLARENDON, an ADDISON or a JOHNSON, a BLACKSTONE or a JONES, give additional strength to your resolutions, animate your endeavours with new ardour, and inspire you with greater alacrity in the pursuit of every study, and the cultivation of every moral and intellectual excellence*.

IV. Consider that no habit is so conducive to the accomplishment of the great ends of education, as a habit of *diligence*. Idleness is the parent of every vice; but well directed activity is the source of every laudable pursuit, and honourable attainment. It is peculiarly adapted to the frame and constitution of youth, promotes good humour, and is conducive to health. Indolence and inactivity are no less subversive of every purpose of mental improvement, than of the general happiness of life. An idle boy will gradually lose the energy of his mind, will grow indifferent to the common objects of pursuit, except such as stimulate his passions with force; and when he advances into life,

* Movemur nescio quo pacto ipsis locis, in quibus eorum quos diligimus aut admiramur adsunt vestigia. Me quidem ipsæ illæ ATHENÆ NOSTRÆ non tam operibus magnificis, exquisitisque antiquorum artibus delectant, quam recordatione summorum virorum, ubi quisque habitare, ubi sedere, ubi disputare solitus sit, studioseque eorum etiam sepulchra contemplor. Cicero de Legibus, lib. 2.

he will with difficulty be prevailed upon to make any important exertion, even for the promotion of his own interest, and much less for that of his friends. The character of a sluggard—of him, who loses the pleasant, the healthy, and the precious hours of the morning in sleep, and the remaining part of the day in indolence, is justly reputed contemptible. While his powers of mind remain torpid, the diligent applies his activity to the most useful ends. His steps may not be uniformly rapid, or his actions always conspicuous; he may not attract the gaze of mankind, or move in the circle of fashionable levity and dissipation; but you may observe that by habitual dexterity of conduct, and the practice of business, he is qualified to meet the difficulties, and fulfil the duties of any situation, in which he may be placed; and you will frequently see him by his unremitting perseverance acquire objects of fortune, distinction, and honour, which men of unimproved talents very rarely, if ever obtain*.

"Excellence is never granted to man, but as the reward of labour. It argues indeed no small strength of mind to persevere in habits of industry without the

* "The sluggard is wiser in his own conceit, than seven men who can render a reason. He who has no inclination to learn more, will be very apt to think that he knows enough. Nor is it wonderful that he should pride himself in the abundance of his wisdom, with whom every wavering thought, every half formed imagination passes for a fixed and substantial truth. Obstinacy also, which makes him unable to discover his mistakes, makes him believe himself unable to commit them." Dr. Powell's Discourse 1. The patient mule which travels slowly night and day, will in the end go farther than the Arabian courser. Persian Proverb.

pleasure of perceiving those advances, which like the hand of a clock, whilst they make hourly approaches to their point, yet proceed so slowly as to escape observation." Sir J, Reynolds.

If you take an extensive survey of the world, you may remark that nothing great or laudable, nothing splendid or permanent, can be effected without the exertion of diligence. Are not the treasures of fortune, the fruits of industry, the acquirements of learning, and the monuments of glory to be referred to its animating influence? Behold the student engaged in poring over the volumes of knowledge by his midnight lamp, and stealing his hours of study even from the season of repose; behold the peasant roused by the dawn of the morning to pursue his daily toils along the furrowed field; repair to the manufactory of the artificer, and amid the various divisions of labour, observe with what alacrity all the sons and daughters of industry are plying their incessant tasks; or visit the crowded haven, where the favourable gales call the attention of the vigilant mariners; and you will remark that the whole scene is life, motion and exertion. In these various situations, in every nation of the globe, from the ardent and enterprising sons of Britain, to the almost countless myriads which people the wide plains of China, you may observe that the principle of diligence, like the great law of creation which causes the planets to perform their invariable revolutions, pervades each busy scene, and throughout the world actuates the race of men for some useful purpose.

V. Finally, never wearied in exploring the means by which your mind may be directed to its proper end, and your ardour for excelling in every thing fair and

good may be increased, turn, frequently turn to the memorable pages of our English history, and consider with due attention THE ILLUSTRIOUS CHARACTERS AND LAUDABLE CONDUCT OF YOUR ANCESTORS. You will find that they were men, favoured by nature with masculine sense and profound judgment, not eager for innovation, but as deliberate in forming as prompt to execute their designs. After long oppression under the papal yoke they vindicated the rights of reason and conscience, became the strenuous supporters of the Protestant faith, and the advocates for a mild and generous toleration. They framed a system of government, the glory of which is limited and hereditary monarchy; and they founded it upon the basis of equal law. To their wise resolutions in council, and to their invincible courage in the field, we owe the blessings of our invaluable constitution. They were remarkable for plainness and simplicity of manners, honouring inbred worth, and raising merit from the humblest station to the most exalted sphere; and yet rendering proper homage to noble birth and high rank. They preserved the due distinctions between the various orders of society, and were sensible of the utility of a just and regular subordination. Behold the monuments of their regard for piety and learning in the churches, colleges, and schools, which overspread the land; and consider the ample provision which they made for the perpetuity of the blessings derivable from christianity and useful knowledge. They were lovers of their country to an enthusiastic degree, and prodigal of their blood in its defence; they were economical, generous, and hospitable; in no respect inferior to the most distinguished people of antiquity—the illustrious natives of Greece and Rome; and in some circumstances rising to a

greater elevation of moral and intellectual dignity, for they acted under the influence of a more temperate and more widely-extended liberty; and they were enlightened by the knowledge of a beneficent, holy, and sublime religion.

To advert to the conduct of those who were distinguished in former times by their merit, has always been considered an excellent and efficacious mode to rouse mankind from the lethargy of indolence to the labours of virtue. To what better instance can I appeal than to the spirited description which Demosthenes gave of Aristides, Miltiades, and the heroic Greeks of their age, to rouse his countrymen to emulation? Olynth. T. p. 98, v. 1. Edit. Allen. We shall do well to recollect how strongly the influence of education was felt in reforming the manners of the Spartans. The great Lycurgus, by his prudent institutions, converted a luxurious and a dissipated people into a temperate and a martial community. And so long as the Romans adhered to their ancient maxims, they pursued their career of victory and glory. But to what more powerful cause than to the relaxation of pristine discipline, and the profligate manners of their noble youth, can we attribute the fall of their mighty empire?*

What therefore was the *principle* which raised the celebrated nations of old to such a pitch of honour,

* A more powerful cause than this may be assigned for the fall of the Roman empire. When the hardy, strong, and courageous people of Gaul, Germany, and Scandinavia had learned the discipline of the Romans and obtained arms, they were an overmatch for them in the field of battle. Editor.

dominion, and renown? Was it the spirit of restless innovation, and avidity for political novelties? Was it not rather a system of laws adapted to the genius of the people, well established by authority, and long persisted in, without deviation from the original plan of each respective constitution? Was it not the peculiar genius of their wise establishment, inspiring the minds of their youths with noble sentiments from age to age, and directing their conduct through successive generations to all that was fair and good? This spirit reigned among the Persians, the brave and virtuous companions of the elder Cyrus, and imparted its choicest influence to the Greeks and Romans of the purest times. And is it not, we may confidently ask, a SIMILAR, or rather a SUPERIOR SPIRIT, which has raised Great Britain to the glorious pre-eminence, which she has obtained among modern nations? Has it not fostered the valour of her heroes, the wisdom of her philosophers, the sagacity of her statesmen, and the skill of her artists?

The great and extensive advantages which must necessarily accrue to society at large, from the proper education of persons in the higher ranks of life, will appear from considering the *influence of their examples upon all around them*. If ignorance should be suffered to cloud their understandings, and immorality, resulting from a want of proper discipline, should disgrace their conduct, the injury done to society will extend to all its members. But if persons in the higher ranks be well instructed in their duty, and their conduct prove the rectitude of their principles, the beneficial effects of their actions, like the overflowing waters of a fertilising stream, will spread far and wide

in every direction, and the final result to the state will be highly important and eminently beneficial, as it will consist in general stability of principles, general regularity of conduct, and general happiness.

The rising generation, brought up in the true principles of religion, enlightened by general knowledge, and encouraged not less by the examples, than improved by the advice of their parents and their teachers, will be freed from the imputation of degeneracy; they will follow their ancestors in the paths of integrity, honour, and true nobleness of conduct; they will be fortified against the attacks and the artifices of infidelity, and will persevere, as they advance in life, in every virtuous and honourable pursuit.

And may this indispensable and invaluable truth be for ever inculcated by parents and teachers, with a degree of solicitude and zeal proportioned to the importance of the subject, and for ever remembered by the young; *that the honour of the* BRITISH CHARACTER, *and the stability of the* BRITISH CONSTITUTION, *must depend upon Religion, Virtue, and Knowledge, as their firmest and best supports.* In the higher ranks of society, and more particularly among PROFESSIONAL men, it is more immediately requisite that these constituents of personal merit should be carried to the greatest perfection. Every sincere lover of his country therefore, will be eager to promote, by all expedients in his power, that RATIONAL, ENLIGHTENED, and COMPREHENSIVE system of education, which improves and perfects all of them; and he will determine that every channel to useful information ought to be opened, every suitable reward proposed, and every honourable incitement held out, which may stimulate our ingenuous youth to IMPROVE TO THE UTMOST OF THEIR POWER

THE FACULTIES WITH WHICH PROVIDENCE HAS BLESSED THEM, IN ORDER THAT THE SEEDS OF INSTRUCTION MAY PRODUCE THE MOST COPIOUS HARVEST OF VIRTUE, AND THEIR CONSCIENTIOUS AND ABLE DISCHARGE OF ALL THE DUTIES OF LIFE MAY CONTRIBUTE EQUALLY TO THE HAPPINESS OF THEMSELVES AND THEIR FRIENDS, AND TO THE GENERAL PROSPERITY AND TRUE GLORY OF THEIR COUNTRY.

SUPPLEMENT

TO CLASS II. CHAPTER II. VOL. I.

ON THE PROPRIETY OF LEARNING OUR OWN LANGUAGE AS AN INTRODUCTION TO FOREIGN LANGUAGES.

THE want of a grammatical knowledge of our own language will not be effectually supplied by any other advantages whatsoever. Much practice in the polite world, and a general acquaintance with the best authors, are good helps, but alone will hardly be sufficient. We have writers who have enjoyed these advantages in their full extent, and yet cannot be recommended as models of an accurate style. Much less then will what is commonly called *learning* serve the purpose; that is, a critical knowledge of ancient languages, and much reading of ancient authors. The greatest critic and most able grammarian of the last age, when he came to apply his learning and his criticism to an English author, was frequently at a loss in matters of ordinary use and common construction in his

own vernacular idiom. A good foundation in the general principles of grammar is in the first place necessary to all those who are initiated in a learned education; and to all others likewise who shall have occasion to learn modern languages. Universal grammar cannot be taught abstractedly: it must be taught with reference to some language already known, in which the terms are to be explained, and the rules exemplified. The learner is supposed to be unacquainted with all but his native tongue; and in what other can you, consistently with reason and common sense, explain it to him? When he has a competent knowledge of the main principles of grammar in general, exemplified in his own language, he then will apply himself with great advantage to the study of any other. To enter at once upon the science of grammar and the study of a foreign language, is to encounter two difficulties together, each of which would be much lessened by being taken separately and in its proper order. For these plain reasons a competent grammatical knowledge of our own language is the true foundation upon which all literature, properly so called, ought to be raised. If this method were adopted in our schools; if children were first taught the common principles of grammar, by some short and clear system of English grammar, which happily by its simplicity and facility is perhaps fitter than that of any other language for such a purpose; they would have some notion of what they were going about, when they should enter into the latin grammar; and would hardly be engaged so many years as they now are, in that most irksome and difficult part of literature, with so much labour of the memory, and with so little assistance of the understanding.

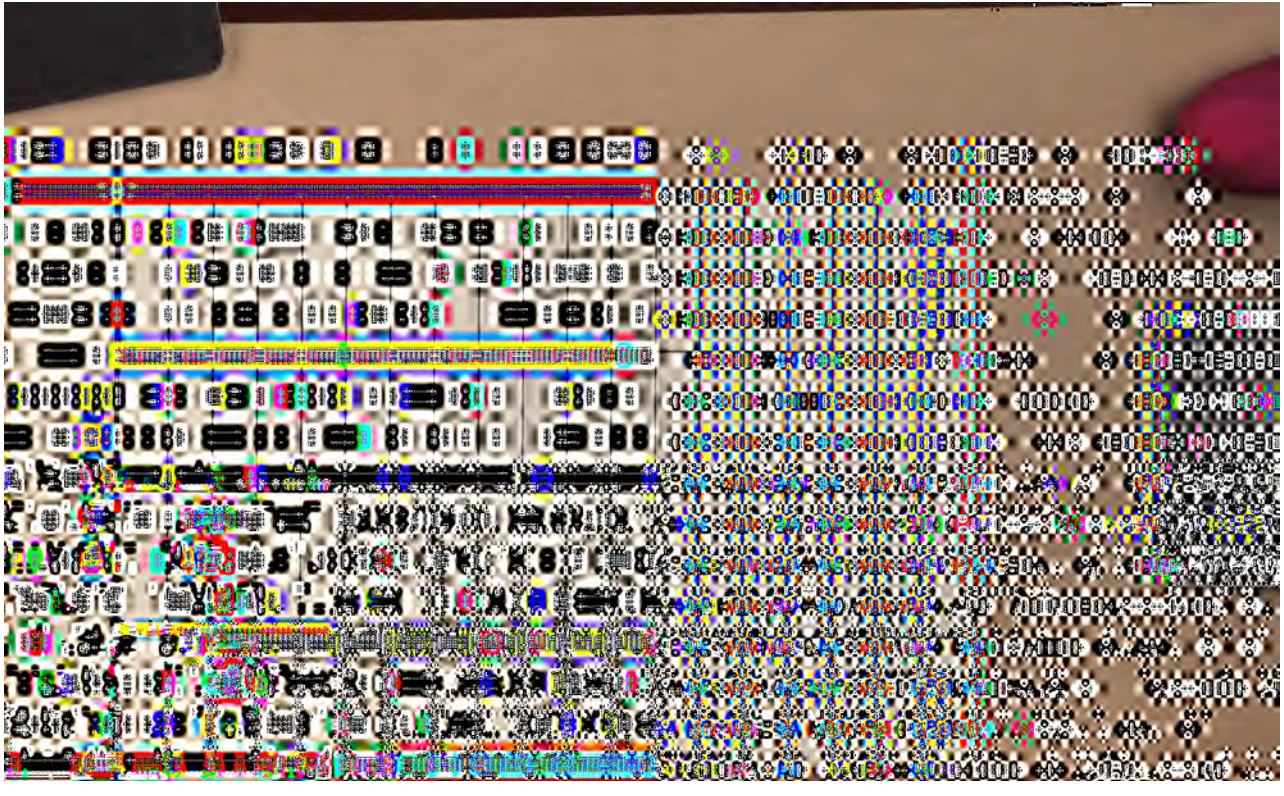
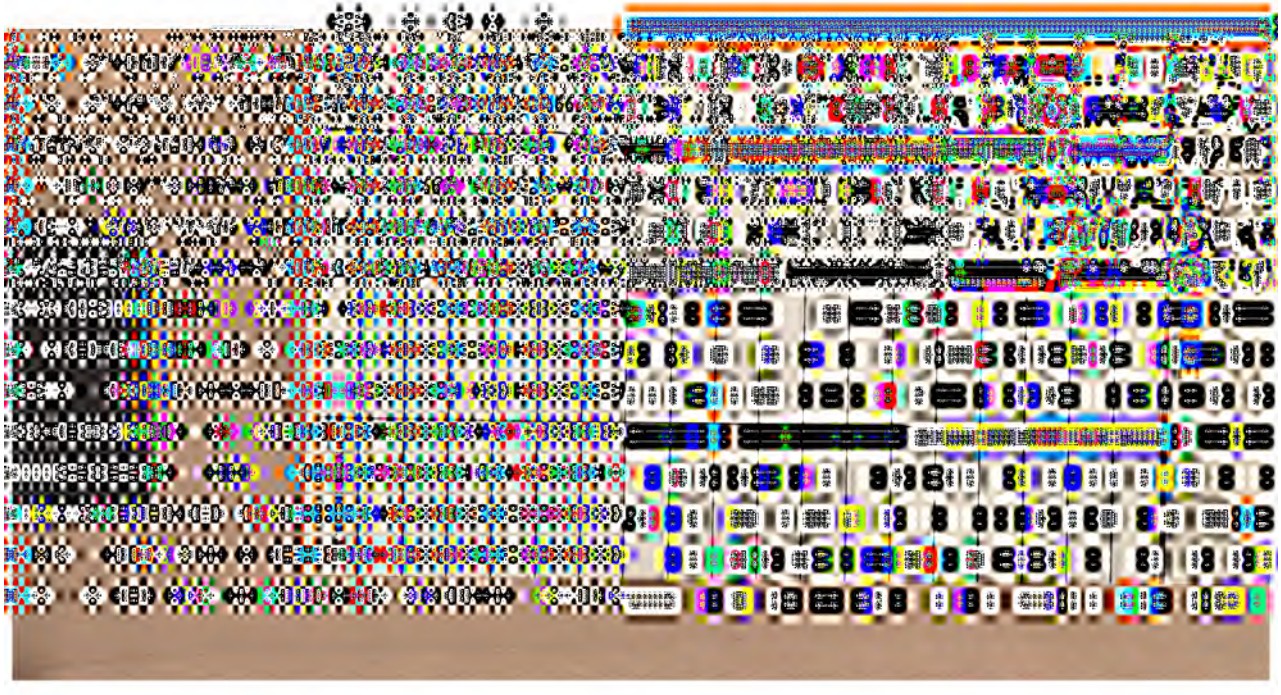
Whatever the advantages or defects of the English language be, as it is our own language, it deserves a high degree of our study and attention, both with regard to the choice of words which we employ, and with regard to the syntax, or the arrangement of those words in a sentence. We know how much the Greeks and the Romans, in their most polished and flourishing times, cultivated their own tongues. We know how much study both the French and Italians have bestowed upon theirs. Whatever knowledge may be acquired by the study of other languages, it can never be communicated with advantage except by such as can write and speak their own language well. Let the matter of an author be ever so good and useful, his compositions will always suffer in the public esteem, if his expression be deficient in purity and propriety. At the same time the attainment of a correct and elegant style is an object which demands application and labour. If any imagine that they can catch it merely by the ear, or acquire it by a slight perusal of some of our good authors, they will find themselves much disappointed. The many errors, even in point of grammar, the many offences against purity of language, which are committed by writers who are far from being contemptible, demonstrate that a careful study of the language is previously requisite, in all who aim at writing it properly.

These observations appear to determine conclusively the subject which we have been discussing. They will suffice therefore to prove that the application of a child to a dead language, before he is acquainted with his own, is a lamentable waste of time, and highly detrimental to the improvement of his mind. It was the

neglect of the cultivation of our own tongue which excited the reproach of M. Voltaire.

The general principles of grammar are common to all languages; a noun is the same in English, French, Latin, Greek, &c. The varieties of languages are easily acquired by observation and practice, when a preliminary knowledge of our own grammar is obtained. But the comprehension of our native tongue is not the only good preparative for the study of other languages. Some previous acquaintance with the general nature of things is necessary to the accomplishment of this end, in order that our literary progress may be obstructed merely by words. For, although it be useful to leave some difficulties in the way of a child, that he may exercise his mind in overcoming them, yet he must not be disgusted by too many or too great impediments. Our whole attention should consist in proportioning the difficulties to his powers, and in offering them to his consideration individually. If latin were made the primary object of a child's lessons, he would lose a vast portion of time in the study of grammar; he would be incapable of perceiving the beauties of that language, because he would not have acquired any previous knowledge. No benefit therefore could possibly accrue from reading, in the latin tongue, subjects which he could not understand in his own. But by becoming well acquainted with our best poets and prose writers he will easily learn, independently of the number of ideas which he will gain thereby, the general rules of grammar; several examples will unfold them, and a proper application of others may be soon made without difficulty. Besides, he will acquire taste and judgment, and be well prepared to feel the beauties of a foreign tongue, when he be-

gins to feel the beauties of his own. His knowledge being also extended and diversified, it will be found that the sole difficulty attendant on the study of latin consists in learning words: so that to obtain a just knowledge of things, he must apply himself to such latin authors only as are within the reach of his capacity, and whose writings he can comprehend with the same facility as if they were written in his native language. By this plan he will easily acquire the latin tongue, treasure up fresh knowledge as he advances, and experience no disgust in the study of it. Nothing can be more useless than to fatigue a child, by filling his memory with the rules of a language which he does not yet understand. For, of what advantage is the knowledge of all its rules, if he be unable to apply them? We should wait therefore till reading has gradually enlightened his mind, and then the task becomes less irksome to him. When he has studied his own language, we should anticipate the principal differences between the latin and English syntax. His surprize in perceiving an unexpected difference will excite his curiosity, and effectually remove all distaste. After this and not before, we may devote a part of each day to latin; but it ought never to be the principal object of his studies.

Such is the outline of this plan of education, which has nature for its basis, and reason for its superstructure; but such a plan, it must be granted, is not to be found in any of our seminaries of learning. Their system inverts knowledge; this proposes to make it orderly and progressive. Theirs is founded on precedent and long established usage; this is recommended by its obvious utility and economy of time.

THE END.